SECTION 26 Psychiatric and drug- related disorders

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ESSENTIALS All physicians experience situations in which they need the know- ledge, skills, and attitudes commonly thought of as belonging to psychiatry. This section of the book aims to help physicians to ac- quire these. It includes: (1) guidance on how to assess medical patients for psychiatric illness; (2) information about psychiatric presentations and the differential diagnoses most relevant to general medical practice; (3) brief reviews of the psychiatric disorders most commonly seen in general medical practice and the practical man- agement of these; (4) guidance on the use of psychotropic drugs and psychological treatments when given as part of general medical care; (5) evidence-based strategies for helping patients who are smoking, using alcohol excessively, or who are overweight. Introduction Physicians face diagnostic and management problems every day for which even a detailed knowledge of physical disease biology does not alone provide an answer. In such cases, the knowledge, skills, and attitudes, usually thought of as 'psychiatric' can be helpful. Examples include the patient with whom doctors find it hard to form a working relationship, patients who are emotionally distressed, and patients who present with physical symptoms that are not explained by identifiable disease. It is unfortunate that psychiatry and medicine have become so divorced from one another, and that the subject matter of psych- iatry has consequently become inaccessible to the physician. The historical separation of psychiatry from the rest of medicine still shapes our thinking and practice, and even the organization of our health services. Indeed, in recent decades, trends in both medicine and psychiatry have tended to widen this historical split: modern medicine has focused increasingly on understanding the molecular biology of disease and less on the whole patient, while psychiatry has focused increasingly on the psychoses and less on the more common psychological problems seen in medical patients. More recently, however, increasing awareness of the fact that medical and psychiatric illnesses often coexist in the same patient has led to a strong trend towards the reintegration of psychiatry into general medical practice. Psychiatric knowledge that is relevant to general medical prac- tice includes useful (if imperfect) systems of classifying illnesses (see next) and evidence for pharmacological and psychological treatments. Relevant psychiatric skills include the ability to manage the consultation effectively, to assess the patient's mental state as well as their physical state, and to find out about the patient's own understanding of their illness. The attitude of non- judgemental acceptance of socially deviant behaviour, essential to the care of

severely mentally ill people, may also be helpful to the physician. It is no secret that some physicians can be dismissive towards patients whom they perceive as ‘psychiatric’. A doctor who is comfortable with and tolerant of patients who have medic- ally unexplained symptoms, illogical fears, or difficult behaviour is likely to be both better able to help these patients and to enjoy their medical practice. Although most physicians do a great deal of what may be referred to as ‘psychiatry’ themselves, specialist psychiatric help is not infre- quently required. Unfortunately, appropriate and useful psychiatric and psychological services are frequently hard to access. This reflects ad- ministrative and geographical separation of services and often a lack of understanding of the pressures of acute medical care by those working in mental health services. Fortunately, in recent years there has been a slow but steady growth in general hospital-based psychiatry and psych- ology services that are specifically dedicated to helping physicians meet the needs of their patients. These services offer improved access and greater acceptability to patients than general psychiatry services, and also are better equipped to manage the problems that are common in medical patients. These services are called liaison psychiatry (linking psychiatry and medicine), psychological medicine (specializing in psy- chological aspects of medicine), and in parts of Europe, psychosomatic medicine (medicine that links mind and body). The chapters The sections that follow aim to provide a practical, and hope- fully accessible, summary of those aspects of the assessment and 26.1 General introduction Michael Sharpe

section 26 Psychiatric and drug-related disorders 6446 management of patients conventionally termed ‘psychiatric’, but which are in fact central to the practice of all of medicine. They include: • Guidance on how to do an efficient psychiatric assessment of a medical patient. • Information about those psychiatric presentations most relevant to general medical practice, including confusion, low mood, med- ically unexplained symptoms, and self-harm, and the differential diagnosis for each. • Brief reviews of the psychiatric diagnoses most commonly encoun- tered in general medical practice including organic mental dis- orders (delirium and dementia), emotional disorders (depression and anxiety), severe reactions to stressors, somatic symptom dis- order, personality disorders, and eating disorders, as well as more basic coverage of the less commonly encountered but important psychiatric diagnoses of bipolar disorder and schizophrenia. • Guidance on the use of psychotropic drugs and psychological treatments when given as part of general medical care. • Useful advice on how to help patients with the common and clinically important problems of alcohol and substance misuse, obesity, and smoking. While some readers might regard this section of the book as merely an unnecessary ‘add on’ to the core contents of a medical textbook, of questionable relevance to the practising physician, I hope most will find it helpful in understanding and meeting their patients’ needs. A note on the classification of psychiatric diagnoses The most widely used classification of psychiatric diagnoses in the United Kingdom and United States is the American Psychiatric Association Diagnostic and Statistical Manual, known as DSM. Currently in its fifth edition, it is known as DSM-5. The other classification frequently used for coding diagnoses is the section in the World health Organization’s International Classification of Diseases known as ICD. Currently in its tenth edi- tion, it is referred to as ICD-10. FURTHER READING American Psychiatric Association (2013). Diagnostic and statis- tical manual of mental disorders, 5th edition (DSM-5). American Psychiatric Press, Washington D.C. Geddes J, Andreason N, Goodwin G (eds) (2017). The new Oxford text- book of psychiatry. Oxford University Press, Oxford. Levenson JL (ed) (2018). Textbook of psychosomatic medicine and consultation-liaison psychiatry, 3rd edition. American Psychiatric Association, Washington D.C. Lloyd G, Guthrie E (eds) (2011). Handbook of liaison psychiatry. Cambridge University Press, Cambridge UK. Sharpe M

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26.2 The psychiatric assessment of the medical pat

26.2 The psychiatric assessment of the medical patient 6447 Jane Walker, Roger Smyth, and Michael Sharpe

ESSENTIALS Medically ill patients often have psychiatric illness. Physicians can and should detect and diagnose these illnesses during their standard medical assessment. All that is required is knowledge of key ques- tions to ask patients, awareness of the clinical signs that may be observed, and an appreciation of the value of additional information from patient's relatives, other clinicians, and the medical record. The aims are to detect and diagnose psychiatric disorders; assess the risk of self-harm or harm to others; establish the need for treatment or referral for a psychiatric opinion; provide the basis for clear and effective communication with a psychiatrist; and to com- municate to the patient that you are interested in all aspects of their suffering and thereby establish a clinically effective relationship with them. The sources of information are relevant history from the patient supplemented with specific questions; the clinician's observation of the patient during the consultation; and relevant clinical records and reports from others (e.g. relatives, nursing staff). The minimum psychiatric assessment comprises the relevant his- tory and key questions based on the patient's presenting complaint, history, and observation; observation of the patient during the con- sultation for signs of mental illness; composition of a list of any psychotropic medication the patient is taking; an assessment (where appropriate) of risk of self-harm

and harm to others; obtaining rele- vant information from relatives and other clinicians as needed; and the use (if required) of scales and tests, such as those for assessing cognitive impairment. Introduction A basic psychiatric assessment is essential for all medical patients. This is because mental illness is so common in patients presenting to physicians. In fact, rather than physical and mental illnesses af- fecting different populations of patients, as is often assumed, they tend to occur together in the same individuals. For example, as many as half of the patients admitted to a medical ward will have a mental illness, most commonly delirium, dementia, depression, anxiety, substance misuse, and somatic symptom disorder. All physicians therefore need to know how to recognize the symp- toms and signs of common mental illnesses. This process is often, but wrongly, thought to be distinct from the standard medical as- sessment, as well as being time-consuming and even risky. In fact, assessing patients for mental illness can be, and should be, an inte- gral part of the medical assessment. It need not be time-consuming and doing it will reduce rather than increase any risk the patient poses to themselves or others. The standard psychiatric assessment is traditionally divided into history taking and the 'mental state examination', which parallel medical history taking and physical examination. In practice, how- ever, the mental state examination is not a separate procedure done after taking the history, but is largely accomplished by observing the patient while taking the history. For example, a patient with depression may say that they feel low (history) and be observed (examination) to look tearful and to speak slowly while giving their history. The psychiatric assessment The psychiatric assessment has several aims and uses multiple sources of information. Aims These are to: • Detect and diagnose psychiatric disorders • Assess the risk of self-harm or harm to others • Establish the need for treatment or referral for a psychiatric opinion • Provide the basis for clear and effective communication with a psychiatrist • Communicate to the patient that you are interested in all aspects of their suffering and thereby establish a clinically effective rela- tionship with them Sources of information These are: • Relevant history from the patient supplemented with specific questions 26.2 The psychiatric assessment of
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 • The clinician's observation of the patient during the consultation • Relevant clinical records and reports from others (e.g. relatives, nursing staff) What to ask and look for The minimum psychiatric assessment comprises: (a) the relevant history and key questions based on the patient's presenting com- plaint, history and observation; (b) observation of the patient during the consultation for signs of mental illness; (c) a list of any psycho- tropic medication the patient is taking; (d) where appropriate, an assessment of risk of self-harm and harm to others; (e) relevant in- formation from relatives and other clinicians as needed; (f) use of scales and tests, such as those for assessing cognitive impairment, if required. The following sections summarize the core symptoms, signs, and additional information useful in detecting and diagnosing the psychiatric disorders most commonly seen in general medical practice. Depression Core symptoms of depression The two core symptoms of depression are pervasive low mood and loss of interest or pleasure (also called anhedonia). To detect low mood, ask the patient how they have been feeling. Be aware that when asked this, medically ill patients often assume they are being asked about their physical symptoms (e.g. pain) so a qualifier (e.g. 'how have you been feeling in yourself, how has your mood been?') may be required. It is also important to be aware that people use different words for low mood such as sad, unhappy, or down. If low mood is suspected, ask the patient just how low their mood has been, using their own word for low mood, and then en- quire how much of the day and for how many days or weeks they

have felt like that to find out how pervasive it has been. To detect anhedonia, find out if the patient has experienced a change in interest in or enjoyment of activities, ask about the things they usually enjoy doing and whether they are still able to get pleasure from these. For the person who is hospitalized or disabled, it is useful to focus on enjoyment of simple activities such as reading or visits from family or friends, and to ask whether they would like to be doing their usual activities if they were able. Box 26.2.1 suggests how to ask these questions. Signs of depression A patient with depression may appear to have lost interest in their appearance or self-care. They may move slowly, look downcast, and fail to make eye contact, have a sad facial expression or even cry. They may talk slowly with little intonation and with a negative, pes- simistic, or even hopeless content to their speech. Other sources of information An account of change in behaviour, including reduced activity and interest, from an informant is useful, as the patient may not always recognize the change in themselves. The medical records may indicate a history of depression, which is typically a relapsing disorder. There are many self-rated ques- tionnaires to determine the severity of depressive symptoms; a commonly used one, which can also be used as an initial screen for depression, is the PHQ-9 (Box 26.2.2). Mania Core symptoms of mania Manic episodes occur as part of bipolar disorder. The core symptoms of mania are abnormally elevated or irritable mood and greatly in- creased energy. These symptoms are severe enough to cause marked impairment in the patient's ability to function at work or socially. To detect mania, recognize if the patient spontaneously reports their mood as unusually good or irritable, their energy as particularly high or their need for sleep greatly decreased. They may describe grandiose ideas (e.g. being able to control the weather) and unchar- acteristic behaviour such as spending beyond their means. Signs of mania A patient with mania may be distractible or restless, and be fidgeting or pacing about the room. They may appear 'infectiously cheerful' or easily irritated. Their behaviour may be overfamiliar and disinhib- ited, for example, sitting in the physician's chair, playing with equip- ment, or making sexual suggestions to staff. They are likely to be talkative with rapid speech that is difficult to interrupt and may be fragmented in content. Other sources of information The patient's account may be unreliable and an account from a close relative or friend is an essential source of information on both pre- vious history and recent behaviour. The medical records may indi- cate a history of bipolar disorder, which is a relapsing condition. Anxiety Patients are often anxious during medical consultations. Anxiety only becomes pathological when it is persistent and severe, or leads to avoidance of important activities or situations. Questions to ask about anxiety are suggested in Box 26.2.3. Core symptoms of anxiety The core symptoms of anxiety are feeling fearful, tense, or on edge. These symptoms may be due to a generalized anxiety disorder (when Box 26.2.1 Asking about depression 'How would you describe your mood recently?' Some patients find it difficult to describe their current mood. Ask them if they have felt down or low at all. Then ask how low—a scale of 1 to 10 can be helpful. Ask them for how long, and for how much of the time, has their mood been as low as this. 'Can you still enjoy things you used to enjoy?' Depressed patients typically describe lack of interest in previously en- joyed activities. If their medical condition is disabling, ask about non- physically demanding activities that they can still do (e.g. watching TV or reading) and whether they would like to be doing their usual activities if they were physically able.

 they are present most of the time), panic disorder (when they occur along with physical symptoms during discrete severe episodes), phobic disorder (when the anxiety occurs in specific situations that are often avoided) or obsessive-compulsive disorder (when associ- ated with recurrent intrusive thoughts and compulsive actions).

To detect an anxiety disorder, ask the patient how often they feel worried, anxious, or afraid. Find out whether the anxiety occurs in specific situations and whether it is preventing them from doing things, such as leaving the house, being able to relax, or attend hos- pital appointments. Ask if there is anything specific that they are concerned about and what they do when they become anxious. When asking about panic attacks enquire about severe anxiety that has a sudden onset with physical symptoms, often accompanied by a fear of collapse or even sudden death. Asking what the patient thinks about when they feel anxious may reveal obsessions, which are recurrent unwanted thoughts that pa- tients are often embarrassed to describe. In obsessive-compulsive disorder these occur along with compulsions; repetitive and illogical actions that relieve the anxiety and which can be elicited by asking what the patient does when they feel anxious. For example, a person with obsessional thoughts about spreading infections may compul- sively wash or disinfect their hands for hours on end. Signs of anxiety During the consultation, patients with anxiety may look tense, sweaty, or shaky. They may repeat questions and seem preoccu- pied with the worst outcomes. If they have a panic attack during the consultation, they will show a sudden onset of anxiety, often with shaking and hyperventilation, that subsides rapidly. Anxiety related to a phobia, for example, of needles, may manifest during the con- sultation at the mention of these. Some patients have an anxious pre- occupation with having a serious illness (health anxiety) and may repeatedly request reassurance or investigations for this. Finally, evi- dence of compulsions such as handwashing may be seen on physical examination as red dry hands. Other sources of information An account from a close relative is useful, particularly in quantifying the degree of avoidance. The medical records may reveal a history of anxiety. Frequent attendance at the hospital or clinic may indicate anxiety about having a serious illness such as cancer. A self-rated questionnaire, such as the GAD-7, can be used to determine the se- verity of generalized anxiety symptoms (Box 26.2.4). Substance misuse Excessive and often harmful use of alcohol is common in medical patients. Some patients misuse other drugs both prescribed (such as opiates) and illicit (such as so-called legal highs). It is therefore useful to routinely ask patients about their alcohol and drug intake, Box 26.2.2 The 9-item Patient Health Questionnaire (PHQ-9) Over the last week how often have you been bothered by the following problems? Not at all (0) Several days (1) More than half the days (2) Nearly every day (3) Little interest or pleasure in doing things ☐ ☐ ☐ ☐ Feeling down, depressed, or hopeless ☐ ☐ ☐ ☐ Trouble falling or staying asleep, or sleeping too much ☐ ☐ ☐ ☐ Feeling tired or having little energy ☐ ☐ ☐ ☐ Poor appetite or overeating ☐ ☐ ☐ ☐ Feeling bad about yourself, or that you are a failure, or have let yourself or your family down ☐ ☐ ☐ ☐ Trouble concentrating on things, such as reading the newspaper or watching television ☐ ☐ ☐ ☐ Moving or speaking so slowly that other people have noticed. Or the opposite—being so fidgety and restless that you have been moving around a lot more than usual ☐ ☐ ☐ ☐ Thoughts that you would be better off dead, or of hurting yourself in some way ☐ ☐ ☐ ☐ Scores of 10, 15, and 20 are the cut-off points for moderate, moderately severe, and severe depression, respectively Box 26.2.3 Asking about anxiety ‘Recently, have you been feeling more anxious than usual?’ If yes, ask the patient to describe how severe the anxiety is and how often it is present. Also ask when the symptoms began and what was happening at that time. ‘Do any particular places or situations make you anxious?’ Establish first whether the anxiety is continual or episodic. If the latter, enquire about those environments or situations that cause the exacerba- tions. This may indicate specific phobias. ‘Have you ever had a panic attack?’ Ask the patient to describe to you what their attacks of anxiety are like. A panic attack is sudden in onset with gradual resolution over the subse- quent 30 minutes. The patient experiences a sensation of extreme anx- iety and fear, usually accompanied by physical manifestations of anxiety such as hyperventilation (which may induce paraesthesia),

dizziness, sweating, and palpitations.

section 26 Psychiatric and drug-related disorders 6450 especially when the reason they have presented, such as an accident or liver disease, is known to be associated. Core symptoms of substance misuse To detect substance misuse, ask the patient whether they drink alcohol and whether they take any drugs, other than the ones prescribed for them. To get an estimate of alcohol intake, ask the patient to go through what they have drunk each day for the last week, noting binges as well as a steady daily intake. The core symptoms of alcohol use disorder are drinking excessively despite negative consequences, unsuccessful at- tempts to cut down intake, cravings, tolerance, and drinking to prevent withdrawal symptoms. Patients with a history of daily or near-daily drinking, with morning drinking, and those regularly drinking more than 15 units of alcohol daily should be considered at high risk of with- drawal symptoms and delirium tremens. Signs of substance misuse There may be obvious signs such as smelling of alcohol, appearing in- toxicated or even carrying alcohol (the clink of bottles in the carrier bag) or other drugs into the hospital. Patients may also show signs of alcohol withdrawal such as shaking, sweating, hallucinations, and seizures. Physical examination may reveal other relevant signs such as evidence of frequent falls, liver disease, or needle marks. Other sources of information People notoriously underestimate their alcohol consumption and an account from an informant is valuable corroboration. Medical re- cords may indicate diagnoses suggestive of alcohol or drug induced harm such as liver disease. The four-item CAGE questionnaire can be used as a screen for problem drinking. In the acute and emer- gency setting, an important issue is the identification of patients at risk of the development of alcohol withdrawal; this is especially likely in those who the final answer yes to the last question of the CAGE—drinking in the morning to prevent withdrawal symptoms. The CAGE questions are listed in Box 26.2.5. Psychosis These include both the so-called ‘functional’ psychoses (schizo- phrenia, acute psychotic episodes, delusional disorder and severe depression or mania) and in the ‘organic’ psychoses (in delirium, dementia, and states resulting from brain injury and substance misuse). In medical contexts, new onset psychotic phenomena are more likely to be a symptom of organic disturbance of brain func- tion, particularly delirium, dementia, or drug and alcohol intoxica- tion or withdrawal, than a functional psychosis. Core symptoms of psychosis The core symptoms of psychosis are delusions and hallucinations. Delusions are fixed false beliefs that often have a bizarre quality, such as thinking the nurses are secret agents. Hallucinations are false experiences (although they seem real and to have come from the outside world to the patient), in any sensory modality, such as seeing rats that are not there or hearing voices when no one is present. It is neither necessary nor appropriate to do routine screening for psychotic phenomena. Asking medical patients about ‘voices’ or ‘odd ideas’ is unlikely to yield much useful in- formation and may perplex them. However, if the history, obser- vation, or other sources of information suggests such symptoms, they should be carefully enquired after. Questions to ask are listed in Box 26.2.6. Signs of psychosis A patient who has a psychosis may appear to be responding to hal- lucinations, for example, looking at places in the room where there are no people or movements or talking to people who are not there. They may behave bizarrely or appear frightened because of their de- lusional beliefs. Signs suggesting an organic psychosis are impaired alertness, visual hallucinations, and a fluctuating mental state. Box 26.2.4 The 7-item Generalized Anxiety Questionnaire (GAD-7) Over the last week how often have you been bothered by the following problems? Not at all (0) Several days (1) More than half the days (2) Nearly every day (3) Feeling nervous, anxious, or on edge ☐ ☐ ☐ ☐ Not being able to stop or control worrying ☐ ☐ ☐ ☐ Worrying too much about different things ☐ ☐ ☐ ☐ Trouble relaxing ☐

□ □ □ Being so restless it is hard to sit still □ □ □ □ Becoming easily annoyed or irritable □ □ □ □ Feeling afraid as if something awful might happen □ □ □ □ Scores of 5, 10, and 15 are the cut-off points for mild, moderate, and severe anxiety respectively Box 26.2.5 The CAGE questionnaire C: Have you ever felt you should Cut back on your drinking? A: Has anyone ever Annoyed you by criticizing your drinking? G: Have you ever felt Guilty about your drinking? E: Have you ever had a drink early in the morning as an Eye-opener? More than two positive responses suggests possible at-risk drinking and should prompt further assessment. N.B. The 'Cage +2' adds two additional questions:

1. What is the most alcohol you have drunk in a single day?
2. What is the most alcohol you have drunk in a single week?

26.2 The psychiatric assessment of the medical patient 6451 Other sources of information History from an informant is crucial. While psychotic illnesses are very variable in presentation, within an individual patient each epi- sode tends to be similar. Therefore asking what symptoms occurred during the most recent relapse and whether similar symptoms are present now is a useful method of enquiry. Medical records may in- dicate a previous history of psychotic illness or the prescription of antipsychotic drugs. Cognitive impairment Impairment in cognitive function is very common in medical pa- tients. The chronic form called dementia becomes more preva- lent with increasing age. The acute form called delirium (or acute confusional state) is a common complication of many medical dis- orders and is especially common in those with some pre-existing cognitive impairment. Core symptoms of cognitive impairment The core symptom of cognitive impairment is the inability to process information. This may manifest as failing memory or the inability to complete simple tasks such as making a cup of tea. Patients with cognitive impairment may also be unable to behave in a socially ap- propriate way. Given the high frequency of, and risk resulting from, undetected cognitive impairment it should be actively considered in all elderly patients. At a minimum, patients should be asked simple questions to determine their orientation to time, place, and person. Signs of cognitive impairment The patient who is cognitively impaired may appear confused and may fail to understand the nature of the consultation or to recall previously provided information. The delirious patient may appear drowsy and have an obviously reduced conscious level. It is im- portant to be aware that a polished social façade may mask signifi- cant cognitive deficits. Other sources of information History from family and friends, carers, or other professionals is cru- cial to both determining the severity of the impairment and whether it is of new onset. It also allows the clinicians to establish how well the patient functions at home when they are unable to give an accurate history themselves. Medical records are often useful in determining the duration of any impairment. The Abbreviated Mental Test (AMT) is a short 10-item bedside screening test for cognitive im- pairment (Box 26.2.7). For practical purposes, however, how much any cognitive impairment affects the patient's real-world function is often more important than absolute scores in standardized tests. For patients found to have cognitive impairment, a more detailed assessment may be required. This should include an assessment of their current functional level, a review of their previous cognitive state and function and the likely cause for any decline. Many bedside tests of cognitive function are available such as the 30-item Montreal Cognitive assessment (MoCA). Eating disorders The most common eating disorders are anorexia nervosa and bulimia nervosa. In both of these conditions, the patient strives for weight control; in the former, they are notably thin and in the latter, they are not. Core symptoms of eating disorders The core symptom of anorexia nervosa is an intense fear of becoming fat, which leads to severe dietary

restriction and low body weight. The core symptoms of bulimia nervosa are recurrent episodes of binge eating with compensatory behaviours intended to prevent weight gain. These symptoms may be detected by asking the patient in detail about their dietary intake, use of laxatives or diuretics and daily exercise regimen, as well as their thoughts about their body size and shape. Signs of eating disorders Low body weight is the most obvious sign of anorexia nervosa. Other signs of eating disorders include eroded dental enamel and calluses on the knuckles (Russell's sign) from self-induced vomiting, lanugo hair, and dry skin. Other sources of information A history from the patient's general practitioner and family is essen- tial. Nursing staff may note that the patient repeatedly refuses food while in hospital, makes trips to the bathroom immediately after eating, or is seen vomiting or hiding vomit. Medical records may indicate complications of eating disorders, such as recurrent elec- trolyte disturbances. Box 26.2.6 Asking about psychotic symptoms 'Have you heard voices when there was no one about?' Hallucinations can occur in any modality of sensation, however auditory hallucinations are characteristic of schizophrenia and similar illnesses. They are experienced as coming from external space rather than 'inside my head'. Their quality, content, and degree of associated distress should be explored. 'Do you ever feel that people are talking about you, or spying on you, or trying to harm you?' Delusions are another core feature of psychotic illnesses and can have a wide variety of contents. Referential and persecutory delusions are com- monly seen. The content of the belief and the patient's rationale for be- lieving it should be explored. A characteristic of true delusions is that they are rigidly held and not amenable to rational argument. Box 26.2.7 The Abbreviated Mental Test (AMT) What is your age? (1 point) What is the time to the nearest hour? (1 point) Give the patient an address, and ask him or her to repeat it at the end of the test. (1 point) (e.g. 42 West Street) What is the year? (1 point) What is the name of this place? (1 point) Can the patient recognize two persons (e.g. doctor, nurse)? (1 point) What is your date of birth? (day and month sufficient) (1 point) In what year was the 9–11 terrorist attack? Or year of the First World War? (1 point) Name the present prime minister or president of the United States. (1 point) Count backwards from 10 down to 1. (1 point) A score of 7 or less suggests some cognitive impairment

 Stress-related disorders Stress-related disorders, by definition, occur in response to a trau- matic or stressful event. These include acute stress disorder and adjustment disorder in which the stressor is current, and post- traumatic stress disorder. The latter may be less obvious and should be suspected when the patient has been or is subject to a major stressor such as a severe car accident. Core symptoms of stress-related disorders The core symptoms of post-traumatic stress disorder (PTSD) are recurrent, intrusive memories of the event, including 'flashbacks', distressing event-related dreams, problems with concentration and hypervigilance, and significant avoidance of things that remind the patient of the event. To detect these symptoms, ask how the patient is coping since the event, whether they are sleeping well and how they are generally feeling about it. Signs of stress-related disorders Patients with PTSD may go to great lengths to avoid distressing memories, for example, driving miles out of their way to avoid the site of a car crash. They may find it difficult to concentrate on the consultation or be noted to have repeated nightmares. Other sources of information The medical records may indicate the nature of the stressor. The timing from the date of the event is important in determining the type of stress-related disorder and therefore appropriate treatment. Personality disorders The core features of personality disorders are extreme and maladap- tive personality traits that cause difficulty or distress to the person themselves or to others. Physicians may be alerted to the possible diagnosis of a personality disorder in patients who recurrently self-

harm, show extreme responses to events, or have unusual ways of re- lating to clinical staff. The diagnosis of personality disorder requires that the patient have a long history of similar behaviours and the exclusion of other psychiatric diagnoses. It therefore requires a thor- ough psychiatric assessment. Somatic symptom disorder The core feature of somatic symptom disorder is concern about physical symptoms that appears to be out of proportion to the se- verity of any associated disease. The concern may manifest as dis- proportionate preoccupation, distress, and disability. The symptoms may be medically unexplained, but somatic symptom disorder also co-occurs with medical disease. Physicians may be alerted to the possible diagnosis of severe somatic symptom disorder during the physical examination by multiple operation scars and from the med- ical records by a history of frequent attendance at medical services and numerous negative (and often repeated) investigations. Severe somatic symptom disorder can be difficult to manage and requires collaboration between all the physicians involved in the patient's care; referral to liaison psychiatry can be helpful in confirming the diagnosis and helping to construct a management plan. Risk of self-harm and suicide When to ask While it would not be appropriate to ask everyone about suicidal in- tent or thoughts of self-harm, this should always be done when there is evidence of depression, and especially when the patient has ex- pressed thoughts that they would be better off dead, feelings of hope- lessness, or when there is a history of self-harm. It is important to be aware that sensitive enquiry will not 'put the idea into the patient's head' or increase the risk of self-harm or suicide. Rather it will pro- vide an opportunity to address and consequently reduce the risk. How to ask It may seem intrusive to ask a patient directly about suicidal thoughts, hence it is often best to ask a graded series of questions, starting with 'How do you feel about the future?' Then 'Has it ever got so bad you thought life is not worth living?', then 'Have you ever thought about ending your life?' and then, if appropriate, 'What plans have you made?' Examples of questions are shown in Box 26.2.8. Signs of previous self-harm Physical examination may reveal marks or scars from previous self- inflicted injuries. Other sources of information Medical records may reveal a history of self-harm. An account from a close relative is valuable is learning about recent attempts of pre- parations. This may include hoarding pills or searching the internet about how to commit suicide. Box 26.2.8 Asking about suicidal ideas 'How do you feel about the future?' 'Do you ever feel hopeless about it?' Most patients will retain a degree of optimism about eventual improve- ment or recovery, even with significant medical illness. A sense of hope- lessness towards the future can be associated with depressed mood and suicidal thoughts, and should prompt further exploration. 'Have you ever felt that it hasn't worth going on, or that life was not worth living?' These thoughts can develop from a sense of hopelessness and are often associated with thoughts of death which may be passive (e.g. 'it would be nice to go to sleep and not wake up'), or active—where the patient considers taking steps themselves to end their life. 'Have you ever thought about ending your life?' If the patient answers yes, enquire about the frequency of these thoughts—are they fleeting and rapidly dismissed, or more prolonged? Are they becoming more common? 'Have you thought about how you would do it?' Explore which methods the patient has considered and what prepar- ations they have made. Violent suicide methods (e.g. hanging, jumping, firearms) are particularly concerning. Repeated visualization of the act of suicide is associated with increased risk. 'Have you ever tried to take your own life?' A history of previous suicidal actions increases the current risk. A recent concealed attempt (e.g. overdose) may necessitate additional medical assessment.

 Risk to others When to ask It is important to consider risk to others when the patient has delusional beliefs that other people are

trying to harm them in some way, are not who they say they are, or are trying in some way to thwart them. Patients with depression are at much greater risk to themselves than to others. However, women with postnatal depression and patients with particu- larly dependent relationships may have thoughts of ending the lives of their loved ones as well as their own. Patients with personality disorders, in particular antisocial personality disorder, may sometimes pose a risk to others and if threats are made, these should be explored. How to ask As with suicidal thoughts, a graded approach is usually best. Prefacing questions with an acknowledgement of the patient's situation, such as, 'this must be very difficult for you' can be followed by, 'sometimes in this kind of situation people start to think about how they could harm the people that are persecuting them' or 'sometimes when people feel this bad and they are thinking about ending their lives, they also think about ending their families' lives', have you had any thoughts like that?' When to seek help If you have any concerns that the patient might pose a risk to them- selves or to others, even if the patient 'says the right things', it is essen- tial to seek a psychiatric opinion. Psychotropic drugs Many patients are taking psychotropic drugs. As well as asking the patient about these, it is important to clarify from records or their usual clinician, what they are prescribed for their psychi- atric condition. Remember to ask about depot medications; these are long acting antipsychotic drugs, often given by fortnightly injection. Also enquire about dosages and pick-up routines for substitute drugs prescribed in addictions—from which pharma- cist are they dispensed, has the prescription been stopped while the patient is in hospital, and does the patient take all of their prescription. FURTHER READING American Psychiatric Association (2013). Diagnostic and statis- tical manual of mental disorders, 5th edition (DSM-5). American Psychiatric Press, Washington, D.C. Kroenke K, et al. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. Gen Hosp Psychiatry, 32, 345–59. Nasreddine ZS, et al. (2005). The Montreal Cognitive Assessment, MoCA: a brief screening tool for mild cognitive impairment. J Am Geriatr Soc, 53, 695–9. Trzepacz PT, Baker RW (1993). The psychiatric mental status examina- tion. Oxford University Press, New York, NY.

26.3 Common psychiatric presentations in medical p

26.3 Common psychiatric presentations in medical patients 6454 26.3.1 Confusion 6454 Bart Sheehan and Thomas Jackson

CONTENTS 26.3.1 Confusion 6454 Bart Sheehan and Thomas Jackson 26.3.2 Self-harm 6457 Kate E.A. Saunders and Keith Hawton 26.3.3 Medically unexplained symptoms 6460 Michael Sharpe 26.3.4 Low mood 6462 Jane Walker 26.3.1 Confusion Bart Sheehan and Thomas Jackson ESSENTIALS Confusion is a very common presentation in medical patients, espe- cially in older people. It may, but does not always, indicate dementia. Delirium describes a typically brief, fluctuating, and transient state of confusion, which requires a vigorous and urgent hunt for the cause or causes. This is often, but not always, an infection or vascular event. The potential role of prescribed drugs in causing confusion should not be forgotten, and other causes of apparent confusion include de- pression. Making the diagnosis might take time, and in the meantime it is important to ensure that the physical and nursing arrangements for care keep the patient safe from harm. Introduction The term confusion is defined as ‘The state of being bewildered or unclear in one’s mind about something’, from the Latin confudere ‘mingle together’. In clinical settings the term is widely used but not defined, being employed to refer to chronic cognitive impair- ment (usually dementia) or acute cognitive impairment (usually de- lirium). The term is used so frequently as to justify a standardized clinical approach in assessing patients. Common

presentations Vignette 1—A presentation of delirium A 91-year-old female care home resident presents to the emergency department. Her GP has seen her earlier in the day and sends a note stating she is ‘off legs, confused.?UTI’. She was prescribed trimetho- prim 2 days before. She fluctuates in alertness, and cannot sustain at- tention to questions. A brief examination of lungs, abdomen, limbs, and heart sounds is unremarkable. Further history indicates that the confusion is new. A diagnosis of delirium is made secondary to a urinary tract infection unresponsive to trimethoprim. Vignette 2—A presentation of dementia A 79-year-old man is admitted from his own home with ‘confusion and agitation’. He has had good physical health, although the referral states he has had ‘memory loss’. He looks after his disabled wife. She reports that over the last 18 months he has begun to care less well for himself, having previously always been very smart. He mixes up days and dates and she has had to take over management of household bills. MRI brain scans show generalized atrophy with more prom- inent volume loss in hippocampal area. A diagnosis of dementia due to Alzheimer’s disease is made. Relevant psychiatric disorders While dementia will often be the diagnosis, especially in older people, delirium is an important differential diagnosis as it re- quires vigorous further assessment to identify easily treatable causes such as infection and alcohol withdrawal. Depression may also sometimes present with apparent confusion—so-called depressive pseudo-dementia—and is important to identify as it is also treatable. The main differential diagnosis is shown in Box 26.3.1.1. 26.3 Common psychiatric presentations in medical patients Box 26.3.1.1 Main differential diagnosis of confusion • Dementia • Delirium (many causes including prescribed drugs, hypoglycaemia & hypoxia) • Alcohol or drug intoxication or withdrawal • Depression (depressive pseudo-dementia)

26.3.1 Confusion 6455 Assessment History The history is the paramount investigation with confused patients (Box 26.3.1.2). For obvious reasons a collateral history is always needed—from family, primary care physician, care home staff, or simply from pre- vious medical notes. The observations of the patient’s behaviour by experienced ward staff may also be invaluable—especially in detecting fluctuation and inattentiveness. The first question is when the patient changed from their baseline mental state. A long history suggests an established dementia. The family or care staff may be aware of the diagnosis and/or the patient may have been prescribed antidementia medication. Patients with undiagnosed dementia often have a history of progressive short- term memory loss, disorientation in time, dysphasia, impairment of activities of daily living including instrumental activities (e.g. using phone/cooking/doing bills) and more basic activities (e.g. dressing/ toileting). There may also be a history of personality change such as a coarsening of manners or the development of apathy. Where the diagnosis is that of a new delirium there will either be little or no evidence of impairment in background cognition or daily activities, or a rapid deterioration from a well-established baseline level of impairment when the delirium is superimposed on a de- mentia. Collateral history will reveal a rapid onset of mental change characterized by vague, inattentive responses, periods of change- able alertness, forgetfulness, disorientation, muddled speech, and changes in mood. There may have been frank psychotic experiences including abnormal visual experiences or paranoid delusions. Key questions to ask are if there were signs of physical illness, a change in medication, or a change in physical location in the days leading to the new mental state. Examination Appearance and behaviour The patient may be dishevelled or show self-neglect. There may be obvious clues to sources of confusion (e.g. a nonfunctional hearing aid, wheeziness/productive cough, or a Parkinsonian tremor sug- gesting Lewy body dementia). In delirium, patients may be aroused and alert, or sleepy. They may show sustained attention during assess- ment (in dementia) or be unable to sustain attention (in

delirium). Speech Patients with dementia are likely to show expressive dysphasia (difficulty with production of speech) or may fail to understand commands (receptive dysphasia). Patients with certain causes of confusion (e.g. Parkinson's disease) may show slurring of speech. Patients with depression may show retardation of speech with low volume answers which are considerably delayed. Mood Patients with acute confusion due to delirium are typically bewil- dered and may appear frightened. Patients with depression look sad or irritable, with a lack of expected emotional reactivity. Patients with dementia are usually normal in effect, though may become la- bile, agitated, or disinhibited as the condition advances. Thoughts Depressive ideas (e.g. depressive delusions of hopeless, guilty, or ni- hilistic type) suggest a severe depressive disorder. Patients with de- lirium may report fractured paranoid ideas (e.g. of people planning to hurt them), but these are rarely sustained. Patients with dementia usually report normal thought content, though may confabulate (re- port plausible but untrue accounts of their recent experiences). Perceptions In dementia, hallucinations are rare except for dementia with Lewy bodies where visual hallucinations are common. Abnormal visual experiences are however common in delirium. Patients currently experiencing visual hallucinations will be seen attending to phe- nomena unseen by the observer. Mood congruent auditory hallu- cinations (e.g. voices commanding the patient to self-harm) are a rare but highly suggestive feature of severe depressive episodes. Cognition By definition, cognition is impaired in confused patients. Commonly used short assessments of cognition include the Abbreviated Mental Test Score (AMTS), which assesses cognition in about three min- utes and is reasonably sensitive to change. On retesting, patients with delirium will usually show some fluctuation with improvement and deterioration, while patients with simple dementia will usually be stable between assessments. Patients with depression may score poorly, but will show a lack of effort, for example refusing to attempt tests of recall or of sustained attention like counting down. More detailed tests of cognition are useful in describing cross sec- tional cognitive impairment, for example the Montreal Cognitive Assessment (MoCA), or the Addenbooke's Cognitive Assessment-III (ACE-III). These require correction of extraneous influences such as a quiet space, fewer interruptions, and the use of visual and auditory aids. A brief attention test (e.g. counting down from 20 to 1) may help identify inattention due to delirium. Insight into their condition Insight is almost always absent in confused patients but this rarely discriminates causes. Patients with severe depression are likely to self-blame for their situation, while patients with dementia may make bland but frank denials of problems. Physical assessment The physical assessment of a patient presenting with confusion is often difficult and may need to be opportunistic. A period of obser- vation may show a slumped patient unable to sustain posture, or they may be agitated and fidgety in the bed. Hands waving in the air, or picking at the sheets are specific signs seen in delirium (floccilation). If the patient is walking then observe the gait for signs of truncal Box 26.3.1.2 Key points in the history of a patient presenting with confusion • What is patient's baseline? (ADLs, cognition, personality) • When did the change happen? • Has any obvious factor led to this? (new drug/operation/change of dwelling) • Has there been a change in alertness/attention span? • Do they seem forgetful even when fully alert?

 rigidity (stiffness), or frank Parkinsonism in vascular dementia or dementia with Lewy bodies. Physical signs are listed in Box 26.3.1.3. Temperature, blood pressure, heart rate, respiratory rate, and oxygen saturation should be done to investigate for infec- tion, or systemic inflammatory response. This is often blunted in older people however. Blood tests for markers of infection (white cell count, C-reactive protein, or blood cultures) should be performed. Neurological examination Neurological examination should focus on

opthalmoplegias, and focal neurological deficits such as unilateral limb weakness. These suggest the presence of stroke, subdural haematoma, or a Parkinson's plus syndrome. Signs of upper limb rigidity or cog- wheeling may be present in cerebrovascular disease or in dementia with Lewy bodies. CT brain imaging is rarely helpful in delirium, but should be done in the context of focal neurological signs, recent head injury, or use of oral anticoagulants. More detailed imaging with MRI, functional imaging, or cerebrospinal fluid examination may be indicated in cases where the diagnosis is unclear. Cardiovascular, respiratory, and abdominal examination These should focus on the assessment of potential sources of infec- tion in the case of delirium. Abdominal examination should rule out peritonism and focus on the possibility of constipation. A rectal examination to look for faecal impaction may be appropriate. Chest and abdominal X-rays should be considered. Urinary system Urinary tract infection is overdiagnosed as a cause of delirium in older people and routine urine dipstick testing is usually of no value due to a low positive predictive value. Urinary incontin- ence may be found in normal pressure hydrocephalus. A palp- able bladder from urinary retention should be excluded; bedside bladder scanning can help. Blood tests should include renal func- tion and electrolytes. Musculoskeletal system Care should be taken to examine for injuries or joint inflammation as a cause of pain. Examine the hips to exclude fracture of the fem- oral neck and have a low threshold to x-ray the pelvis. Management The first priority in management is to keep the confused person safe. In hospital this usually requires a quiet side room and often special nursing attention. Sequential assessments are always necessary in confused patients. Rapid and potentially useful assessments include the Confusion Assessment Method (CAM) or a brief cognitive assessment like Abbreviated Mental Test (AMTS) or 4-AT. The CAM helps focus on the key clinical features of delirium—rapid onset, fluctuating course, inattention, disorganized thinking, and altered level of consciousness. For delirium an urgent and vigorous search for the cause is re- quired. As well as common causes such as infection, cerebral is- chaemia and cardiac ischaemia it is important not to forget the effect of prescribed medications and withdrawal from alcohol. Rapid reso- lution of symptoms makes delirium the most likely diagnosis, and no further action may be required. However if the patient remains persistently cognitively impaired, without fluctuation, in clear consciousness, then dementia must be strongly suspected. Referral on to a memory clinic is likely to be re- quired, and done according to local protocols. A clinical picture dominated by agitation, psychomotor retard- ation, gloominess, poor oral intake and passive resistance to care will strongly suggest a severe depressive disorder and urgent referral to psychiatric services is needed. Conclusion Patients presenting with confusion in general hospitals are at high risk of having significant undiagnosed organic brain disorders, with up to half of all cases of dementia being undiagnosed. The rate of diagnosis could potentially be improved by systematic screening, though potential problems include the high mortality of patients who have been through the general hospital, and the high propor- tion of false positive cases who will be subject to stressful and nega- tive investigations for dementia. Contrary to common belief, many cases of delirium do not re- solve rapidly. Around 40% of general hospital cases of delirium are unresolved at discharge and up to 20% of cases are unresolved after six months. Finally, delirium is also a well-established risk factor for development of later dementia. FURTHER READING Inouye SK (2003). The Confusion Assessment Method (CAM): Training manual and coding guide. Yale University School of Medicine, New Haven, CT. Sampson E, et al. (2009). Dementia in the acute hospital: Prospective cohort study of prevalence and mortality. Br J Psychiatry, 195, 61–6. Cole MG (2010). Persistent delirium in older hospital inpatients. Curr Opin Psychiatry, 23, 250–4. Bellelli G, et al. (2014). Validation of the 4AT, a new instrument for rapid delirium screening: A study in 234 hospitalised older people. Age Ageing, 43, 496–502. Gross AL, et al. (2012). Delirium

and long-term cognitive trajectory among persons with dementia. Arch Int Med, 172, 1324–31. Box 26.3.1.3 Common physical signs that are important not to miss in the confused patient • Urinary retention, constipation • Occult causes of pain • Has there been a recent fall or injury? • Are there signs of hip injury? • Neurological signs • Obvious ophthalmoplegia • Obvious hemiplegia • Physical signs of delirium • Typical hand movements (aimless plucking at bed clothes, also known as floccilation or tilmus) • Tremor, dysgraphia

26.3.2 Self- harm 6457 Kate E.A. Saunders and Keit

26.3.2 Self- harm 6457 Kate E.A. Saunders and Keith Hawton

26.3.2 Self-harm 6457 26.3.2 Self-harm Kate E.A. Saunders and Keith Hawton ESSENTIALS Self-harm is one of the commonest reasons people present to hos- pital emergency departments and the most frequent form of self- harm is overdose. Most patients who self-harm have an emotional disturbance, commonly an adjustment or mood disorder, often in a context of situational or relationship stresses, and personality difficul- ties. Some have more severe psychiatric disorders. Intoxication with alcohol is common. All patients presenting with self-harm require both a medical and a psychiatric assessment. The latter should include an assessment of problems, needs and suicide risk. Children require particularly careful assessment. In assessing suicide risk, it should be noted that the medical dangerousness of the act does not necessarily reflect the intent, and that repeat self-harm greatly increases the risk of eventual suicide. Psychiatric management depends on the patient’s problems and diagnosis. There is some evidence that brief psychological inter- vention can decrease the risk of repeat self-harm. Introduction Self-harm is the term used in the United Kingdom (and much of Europe) to describe intentional nonfatal self-poisoning and self-injury, irrespective of motive. Self-harm is a significant and increasing problem in most developed (and some developing) coun- tries. Two-thirds of patients who self-harm are under 35 years of age. Self-harm is rare in children but becomes more common in adoles- cence. Self-harm is more common in females and more common in areas of socioeconomic deprivation. Most patients seen in general hospitals for self-harm have taken overdoses. In the United Kingdom, the substances most frequently involved are nonopioid analgesics, particularly paracetamol and paracetamol-containing compounds, and psychotropic agents, es- pecially antidepressants and minor tranquillizers. Some patients present with self-injury, most commonly self-cutting but sometimes following more violent self-harm such as hanging or jumping from a height. In lower- and middle-income countries, more toxic sub- stances, such as pesticides, are often used for self-poisoning (espe- cially in rural areas), with consequent higher fatality rates. Case examples Case 1. An 18-year-old woman presents at 23.00 h on a Saturday having taken a packet of paracetamol following

an argument with a boyfriend and while intoxicated with alcohol. She has presented previously in similar scenarios. The history reveals a troubled up- bringing with foster parents and ongoing difficulty with relation- ships with others. Further assessment reveals fluctuating mood but no depressive disorder. The assessment finds evidence of person- ality problems and problem drinking. Case 2. A 60-year-old man is admitted to hospital after attempted self-hanging. He is divorced, has lost his job, and is in debt. He left a suicide note. He has no pre- vious episodes of self-harm. Assessment reveals a severe depressive disorder and a high suicide risk. Relevant psychiatric disorders Most who present to hospital following self-harm will have a psy- chiatric disorder, the most common being depression, anxiety disorders, and personality difficulties and disorders. Adjustment disorders to interpersonal problems and broken relationships (es- pecially in the young), employment difficulties, legal and housing problems, and alcohol and drug misuse are also common. Self-harm may also occur in the context of a psychotic illness such as schizo- phrenia or bipolar disorder. Assessment Immediate assessment of risk In addition to the immediate assessment of the medical conse- quences of self-harm, a brief and early assessment of the patient's psychiatric state and risk is essential. In particular, it is important to know whether the patient has a serious psychiatric disorder (e.g. psychosis or severe depression) and/or is actively suicidal in order to determine the need for urgent psychiatric attention. Risk may be ongoing and dangerous tablets or other potential methods of self- harm (e.g. blades, ligatures) should be removed from the patient's possession. Patients who self-harm may leave hospital before a psychiatric assessment can be completed. Such patients tend to have a his- tory of substance abuse and previous self-harm, and may exhibit disturbed behaviour in hospital. Where a patient is thought to be at serious risk and wanting to leave hospital, medical staff can (in England and Wales at least) detain the patient under the Mental Capacity Act until a psychiatric opinion can be obtained. Then, if necessary, detention under the Mental Health Act can be arranged. Refusal of medical treatment Difficulty commonly arises when patients refuse potentially life- saving medical treatment. This problem is most common in those who have poisoned themselves, such as with large overdoses of para- cetamol, for which early treatment can prevent the development of potentially fatal liver damage. The dilemma then is whether to in- stigate medical treatment against a patient's will. In most countries, the issue is one of mental capacity. To show that patients have the capacity to refuse treatment, they must: • Be able to understand and retain information on the treatment proposed, its indications, and its main benefits, as well as possible risks and the consequences of nontreatment • Be capable of weighing up the information in order to arrive at a conclusion • Be able to communicate this decision Efforts should be made to optimize a patient's capacity before con- cluding that it is lacking. If a clinician instigates treatment against a

 patient's wishes in a patient who has capacity, then the clinician is at risk of being accused of assault. Where the patient is judged to be lacking capacity, essential medical treatment can be instigated (in England and Wales) under the Mental Capacity Act. In situations of dire emergency, most clinicians would choose to instigate essential medical treatment to save the patient's life and sort out legal issues afterwards. Such understandable action is unlikely to lead to suc- cessful litigation as long as the clinician is seen to act in the patient's best interest. Psychiatric and social assessment General hospital medical and nursing staff should be able to as- sess the patient who has self-harmed, but in many hospitals there are specialist mental health teams who do this. The main topics to be covered when interviewing the person who has self-harmed are listed in Box 26.3.2.1. A useful way of assessing

the events and dif- ficulties that preceded the act, the nature of the act, possible motiv- ation, and suicidal intent, is to obtain a detailed account of the few days leading up to the self-harm. Whenever possible the patient's account should be supplemented with reports from informants such as a partner, relatives, and friends and other involved in the patient's care, including their general practitioner. Assessment of the motives or intentions underlying self-harm is based on the circumstances of the act, the patient's account, that of other informants, and deduction by the clinician. Common motives or intentions for attempted self-harm are shown in Box 26.3.2.2. Suicidal intent (that is to say, the extent to which the patient wished to die at the time of self-harm) can usefully be assessed by reviewing the circumstances of the act and the explanation given by the patient and by relatives or friends. Factors suggesting high suicidal intent are shown in Box 26.3.2.3. It is also important to take account of what the patient and others say about the purpose of the act. About one-third of patients will say that they definitely wanted to die, although in some cases the circumstances of the act will suggest otherwise. However, there is a small but important group of patients who will claim they did not wish to die when the circumstances sug- gest high suicidal intent; such patients may be at increased risk of repeated self-harm, which has a high chance of being fatal. Scoring systems can assist in the assessment of suicidal intent (e.g. the Beck Suicide Intent Scale). It is important to recognize that the objectively assessed risk to life judged by the method used is a poor and potentially misleading measure of the extent to which a patient wanted to die. Many pa- tients have little idea about the relative dangers of substances taken in overdose. Thus, a small overdose of a benzodiazepine hypnotic or even an antibiotic may be a serious suicide attempt for some patients, whereas a large overdose of a highly dangerous analgesic might be taken with low intent by others. People in the medical and allied health professions are an exception, and usually the danger of their acts is a good measure of intent. Very dangerous self-injuries such as jumping from a height are usually associated with high sui- cidal intent, but not always. Estimation of the risk of repetition and of suicide following self- harm both short-term and long-term, is an important part of the assessment. Factors associated with an increased risk of repeated self-harm and of suicide are shown in Table 26.3.2.1. However, it is essential to recognize that such predictive measures are notoriously imprecise. Patients with risk factors for repetition have a high risk of repeating, but many who repeat—possibly more than half—have few risk factors. The prediction of suicide is difficult, in part because the risk of suicide is relatively low. Assessment of protective factors is based on past behaviour under stress and the patient's account of whom they can turn to for sup- port. It is important to assess whether the patient has difficulties in problem-solving, as these can be a target for therapy. The best evi- dence for such difficulties will be a description of the methods used to solve problems in the past. It is always important to determine Box 26.3.2.1 Areas to be covered in the assessment of patients who have self-harmed • Life events that preceded the act • Motives for the act, including suicidal intent and other reasons • Problems faced by the patient • Psychiatric disorder • Personality traits and disorder • Alcohol and drug misuse • Psychiatric treatment • Previous self-harm and its consequences • Family and personal history • Exposure to suicide/self-harm in friends and/or the media (including the Internet and social media) • Current circumstances, such as: • social (e.g. extent of social relationships) • domestic (e.g. living alone or with others) • occupation (e.g. whether employed) • Psychiatric history, including previous suicide attempts • Risk of a further self-harm • Risk of suicide • Coping resources and supports Box 26.3.2.2 Common motives or intentions for self-harm • To die • To escape from an unbearable situation • To get relief from a distressed state of mind • To change the behaviour of others • To show desperation to others • To get back at other people/make them feel guilty • To get help Box 26.3.2.3 Factors suggesting high

suicidal intent • Act carried out in isolation • Act timed so that intervention unlikely • Precautions taken to avoid discovery • Preparations made in anticipation of death (e.g. making a will, organizing insurance) • Preparations made for the act (e.g. purchasing means, saving up tablets) • Communicating intent to others beforehand • Extensive premeditation • Leaving a note • Not alerting potential helpers after the act

26.3.2 Self-harm 6459 whether current problem-solving is impaired by depression or other psychiatric disorder. Management The management of self-harm will depend in part on the medical and psychiatric diagnoses. However, there are general principles that apply to the psychological management of all patients. Some patients who have self-harmed appear ambivalent about accepting help, or even frankly dismissive of it. Clinicians may have to work hard in some cases to explain to patients how treatment might be of benefit to them. The assessment procedure can itself be therapeutic. It may provide patients with a first opportunity to discuss their difficulties with a clinician. Joint interviews with family members can improve com- munication. The psychosocial assessment probably reduces the like- lihood of repetition of self-harm. Some patients thought to be at high risk of suicide refuse psy- chiatric treatment when this is judged essential. Their subsequent management depends on whether the patient is suffering, or likely to be suffering, from a mental illness that necessitates hospital assessment and/or treatment. In most countries, if a patient is thought to be at serious risk or seriously mentally ill, emergency department staff would be judged to be acting reasonably if they held the patient in the department until a psychiatric opinion could be obtained. Major psychiatric disorders should receive appropriate treatment. Caution is needed where there is ongoing risk of self-poisoning with consideration given to the toxicity of the treatment and the amount prescribed. The evidence that simple interventions reduce the risk of repeated self-harm is not strong, but there is increasing evidence for the efficacy of psychological treatments, especially brief cognitive behavioural therapy, including for reducing depression, hopeless- ness, and suicidal ideation. Furthermore, intensive and prolonged psychological therapy (dialectical behavioural therapy) can re- duce the frequency of self-harm in patients with a history of mul- tiple acts of self-harm and borderline personality disorder. Contact interventions such as sending postcards to patients at regular inter- vals following self-harm may reduce repetition where community psychiatric services are minimal or absent. Most evidence for spe- cific interventions following self-harm comes from studies in adults and far less is known about the benefit of intervention for children and adolescents or older adults. The assessment of patients who have engaged in self-harm is re- garded by some physicians as primarily the responsibility of psy- chiatrists. However, it has been found that nurses, social workers, and other clinicians can assess these patients reliably, make ef- fective aftercare arrangements, and provide therapy. Staff of what- ever discipline should have the experience and skill to manage patients with emotional and psychiatric disorders, and have been trained in the assessment and treatment of patients who have self- harmed. They also require supervision and support from senior psychiatrists, especially when managing patients with severe psy- chiatric disorders and where compulsory admission to hospital may be required. Outcome Self-harm is often repeated; 12–25% of people repeat the act within a year. In the United Kingdom, around 1% will die by suicide within a year and 3–5% within 8–10 years. More than half of people dying by suicide have a prior history of self-harm. In older patients, the risk of suicide is higher. Self-harm is also associated with physical illness as well increased mortality from natural causes, especially alcohol- related disorders. Specific subgroups of patients Alcohol and drug abusers Many patients who self-harm have problems related to alcohol and drug abuse, and these factors—especially alcohol abuse—increase the risk of both repetition

and suicide. Screening for substance abuse should therefore be part of self-harm assessment. Patients with personality disorders Personality difficulty or disorder is a common primary or comorbid diagnosis in patients who self-harm. Repetition of self-harm is very common in this group and their suicide risk is significant. At pre- sent, there are no licensed medications for personality disorder and admission to inpatient psychiatric wards is only advised for crises where all community options have been exhausted. Some areas have designated services for people with severe personality dis- orders. For those who repeat very frequently it can be useful to have a pre-agreed approach to management in order to ensure safe and consistent care. Children and young adolescents It is usually advisable that children and young adolescents who self-harm be admitted to hospital as they may require particularly complex and often prolonged assessment, including interviews with their families and the possible involvement of community statutory services (e.g. social services). Table 26.3.2.1 Factors associated with an increased risk of a repeat self-harm and of suicide Self-harm Suicide • Previous episodes of self-harm • Personality disorder • Alcohol or drug abuse • Previous psychiatric treatment • Unemployment • Socio-economic deprivation • Criminal record • History of violence • Single, divorced, or separated • Older age • Male gender • Unemployed or retired • Separated, divorced, or widowed • Living alone • Poor physical health • Psychiatric disorder (particularly depression, alcoholism, schizophrenia, and personality disorder) • High suicidal intent in current episode • Violent method involved in self- harm (e.g. attempted hanging, jumping) • Leaving a suicide note • Previous self-harm, especially multiple episodes

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section 26 Psychiatric and drug-related disorders 6460 Elderly patients Self-harm in older patients, while much less common than in younger people, is often of high suicidal intent and carries a high risk of sub- sequent suicide, hence routine admission to a medical bed is often recommended for this group. The involvement of the older adult psychiatry service (if one exists) is important in planning aftercare. FURTHER READING Carroll R, Metcalfe C, Gunnell D (2014). Hospital presenting self- harm and risk of fatal and non-fatal repetition: systematic review and meta-analysis. PLoS One, 9, e89944 Hawton K, Saunders KEA, O'Connor R (2012). Self-harm and suicide in adolescents. Lancet, 379, 2373–82. Hawton K, et al. (2016). Psychosocial interventions for self-harm in adults. Cochrane Database Syst Rev, 5, CD012189. National Collaborating Centre for Mental Health (2004). Self- harm: the short-term physical and psychological management and secondary prevention of self-harm in primary and secondary care (full guideline), Clinical Guideline 16. National Institute for Health and Clinical Excellence, London. National Institute for Health and Care Excellence (2011). Self-harm: the longer-term management (full guideline), Clinical Guideline 133. National Institute for Health and Care Excellence, Manchester. 26.3.3 Medically unexplained symptoms
Michael Sharpe ESSENTIALS Physical symptoms are not always associated with disease. In sec- ondary medical care as many as a third of patients present with symp- toms unexplained by disease. Such 'medically unexplained symptoms' pose a challenge for clinical services that focus on identifying and treating disease. The principles of effective management are to: (a) avoid overinvestigation and giving speculative treatment for disease, (b) take a positive approach with the patient, accepting the reality of the symptoms while explaining clearly that they do not indicate dis- ease, (c) identify and provide treatment for associated depression and anxiety disorders, (d) refer for psychiatric or psychological treatment when required. Complex cases with multiple

persistent medically un- explained symptoms are at particular risk of iatrogenic harm and re- quire active multidisciplinary management. Psychological treatments such as cognitive behaviour therapy may be effective. Introduction Patients generally present to doctors with symptoms for which the doctor then seeks evidence of disease. If bodily disease is found it is typically assumed that the symptoms were an expression of that disease; to put it another way, the disease ‘explains’ the symptoms. If no disease is found, the symptoms may be regarded as ‘medically unexplained’. While labelling symptoms as ‘medically unexplained’ may have some practical use in limiting excessive investigation and inappro- priate treatment, it also has limitations. First, it may be used to imply that only symptoms associated with objectively identifiable physical disease are real, whereas all symptoms are subjective phenomena and always real to the sufferer. Second, it assumes that medicine is only concerned with bodily disease whereas the many physiological, psychological, and social factors that contribute to the production of symptoms are also legitimate areas of medical interest. Medically unexplained symptoms (MUS) are common. They account for a substantial proportion of the work of most doctors. How explained a symptom is by disease may be regarded as being on a continuum from ‘not at all explained’ to ‘completely explained’, with a gradation in between. When defined as symptoms associated with but inadequately explained by disease, they account for approximately one-third of new medical outpatient consultations and when defined as symptoms in the absence of any disease, about 1 in 10 consultations. Although sometimes dismissed as merely the ‘worried well’, pa- tients with medically unexplained symptoms often suffer even greater disability and distress than patients whose symptoms are ex- plained by disease. They are also expensive to the healthcare system because they may receive extensive but unproductive investigation and treatment without benefit. Understandably, doctors often find patients with medically unexplained symptoms ‘difficult to help’. Given the size and importance of this clinical problem, it is sur- prising how relatively neglected it is in textbooks. Common scenarios Almost any symptom can remain medically unexplained, even after exhaustive medical assessment. Common examples include pain (including back pain, chest pain, abdominal pain, and headache); fatigue and weakness; dizziness; ‘fits’ and funny turns. Symptoms can present singly, but are often multiple. Case 1. A typical presentation. A young woman has attended her primary care physician repeat- edly with headache. The history reveals nothing specific about the headache but she is concerned that she has a brain tumour. Examination is normal but she is anxious. She requests a brain scan. Case 2. A complex presentation. A middle-aged woman, referred to as a ‘heart-sink’ patient by her primary care physician, is referred to a general medical outpatient service with dizziness, bloating of her stomach, and generalized weakness. She has extensive medical notes documenting her pre- vious presentations with a range of symptoms including pain in various places, irritable bowel, menstrual problems, and transient loss of sight. She has had many investigations, as well as a hyster- ectomy and three laparotomies. She is taking a long list of pre- scribed medications, including oral opioids. Review of her notes reveals various diagnoses including endometriosis, none of which adequately explain the presentation. Examination reveals only several operation scars.

26.3.3 Medically unexplained symptoms 6461 Differential diagnosis The main medical differential diagnosis for medically unexplained symptoms is serious disease. Diagnostic difficulties are likely to occur with unusual presentations of common diseases and with rare diseases. While the risk of missing the diagnosis of serious disease is clearly an appropriate concern, the evidence indicates that once a patient has been carefully assessed, the later emergence of a ‘missed’ disease is uncommon. What is more common is the failure to ad- dress the differential diagnosis. Functional

somatic syndromes There are specialty specific syndrome names to describe patients with medically unexplained symptoms (Table 26.3.3.1). These are based on the bodily system the physical symptoms are presumed to relate to and the associated medical specialty. These are not alterna- tives to the psychiatric diagnoses listed next, but rather provide a parallel descriptive system that can be of pragmatic descriptive value. Psychiatric diagnoses There are several psychiatric diagnoses relevant to patients with medically unexplained symptoms (Table 26.3.3.2). These are based on the patient's psychological rather than physical symptoms and are not therefore specific to bodily system or medical specialty, and they may have important implications for treatment. Depression and anxiety Depression and anxiety disorders have physical as well as psycho- logical symptoms. Fatigue, weight loss, and pain are common in depression. Chronic tension, bodily aches, and poor sleep suggest chronic anxiety. Severe episodic symptoms such as chest pain, dizzi- ness, and breathlessness suggest panic attacks. Health anxiety disorder When the patient has severe anxiety focused specifically on the fear of possible sinister causes for their symptoms, the appropriate diagnosis might be health anxiety disorder (previously called hypo- chondriasis). Such patients may check their body many times a day, repeatedly seek reassurance from the physician and ask for repeated investigations. Somatic symptom disorder When the patient does not have a depressive or anxiety disorder, a diagnosis of somatic symptom disorder might be appropriate. This disorder was previously called somatoform disorder. It may be simple, with concern about a few symptoms, or complex, with mul- tiple persistent symptoms and high use of healthcare. Functional neurological disorder Patients whose symptoms include loss of a function such as move- ment of a limb or loss of vision that is not explained by disease may have a functional neurological disorder. This was previously called conversion disorder or conversion hysteria. Psychosis Occasionally the physician may encounter a patient whose phys- ical symptoms are part of a psychosis. The clue to the psychotic nature of the presentation may be the patient's bizarre descrip- tion of and explanation for the symptom; for example, a shifting burning feeling in the skin resulting from radio waves beamed by persecutors. Factitious disorder and malingering Patients occasionally deliberately feign or simulate symptoms. If the apparent aim of this behaviour is to obtain medical attention and treatment the diagnosis given is that of 'factitious disorder' (which is preferable to the eponym Munchausen's syndrome used to describe severe wandering cases of factitious disorder). Sufferers are usually female, often in caring roles, and have histories of childhood mal- treatment and illness. Factitious disorder should be distinguished from malingering, which is not a psychiatric disorder but a term used to refer to a be- haviour of deliberate deception in order to obtain a desired aim such as financial compensation or release from prison. Assessment The conclusion that a patient's symptoms are medically unexplained may be arrived at only after history, examination, and investiga- tion. Sometimes the history alone suggests that the symptoms de- scribed are not those of disease. While misdiagnosis of medically unexplained symptoms is relatively uncommon, it is more likely to occur when the patient looks 'psychiatric' or has a history of mental illness. Table 26.3.3.1 Medical specialty specific names for medically unexplained syndromes Syndrome Specialty Irritable bowel syndrome, nonulcer dyspepsia Gastroenterology Premenstrual syndrome, chronic pelvic pain Gynaecology Fibromyalgia Rheumatology Atypical or noncardiac chest pain Cardiology Hyperventilation Respiratory medicine Chronic (post-viral) fatigue syndrome Infectious diseases Tension headache, nonepileptic attacks Neurology Table 26.3.3.2 Psychiatric diagnoses for medically unexplained symptoms Diagnosis Notes Depressive disorder Anxiety and panic disorders Somatic symptom disorder Previously called somatoform disorder or somatization disorder Health anxiety disorder Previously called hypochondriasis Conversion disorder Also called functional neurological disorder Psychosis With

somatic delusions and hallucinations Factitious disorder

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section 26 Psychiatric and drug-related disorders 6462 Physical examination Even if symptoms are suspected to be medically unexplained, it is useful to physically examine the patient. This may not only reveal unsuspected clinical signs but also helps to reassure the patient that their complaints have been taken seriously and properly assessed. Investigation Investigations are important. However, a balance must be struck be- tween the risk of missing disease and the potential iatrogenic psy- chological harm in increasing the patient's fear of disease that can result from excessive and unnecessary investigation. Asking about fears and beliefs It is particularly important to find out what the patent thinks or fears is wrong with them. This can reveal why they have presented (e.g. 'I am worried that it could be cancer'). In some cases anxiety about a specific disease may be the main reason for presentation. If this is severe and persistent, the diagnosis may be one of health anxiety (hypochondriasis). If bizarre and fixed, it may indicate a delusion. Asking about psychological symptoms Asking about the additional psychological symptoms may indicate one of the treatable psychiatric diagnoses listed in the differential just mentioned. However, care must be taken with asking about psy- chological symptoms such as depressed and anxious mood as this may give the patient the impression that their concerns about phys- ical disease have been prematurely dismissed. Consequently, such enquiry is often best done only after taking a history of the physical symptoms when they can be asked about as understandable conse- quences of the symptoms themselves. Management The management will depend on the diagnosis, but there are general principles: • First, patients need to know that the doctor believes them. Symptoms are subjective phenomena and the lack of disease does not mean that their suffering is in some way inauthentic. It often helps to spell this out: 'I appreciate that you have had some very troublesome and distressing symptoms'. • Second, they need a clear message that no serious disease has been found. However, this needs to be worded carefully. Simply saying 'there is nothing wrong' can be heard by the patient as being dismis- sive of their symptoms. Rather it may be better to say: 'I am pleased to be able to tell you that, despite how troubling these symptoms have been, they do not indicate a serious medical disease.' • Third, patients need a positive plan. This may include follow up from the physician, referral to a colleague, or a recommenda- tion to the primary care physician. This can be explained as fol- lows: 'I do hope that your symptoms will improve. They often do. However, in case they do not I will see you again/ask

your primary care physician to review you in a month's time to review the need for treatment'. The specific treatment will depend on the diagnosis. When there is evidence of a depressive or anxiety disorder, this can be explained as follows: 'Having physical symptoms can lead to depression and anxiety; these in turn can make the symptoms worse— a vicious circle. I suggest that we treat the depression/anxiety and see if the physical symptoms improve. In my experience they often do.' When the diagnosis is somatic symptom disorder, so-called 'anti- depressant drugs' and specific forms of cognitive behaviour therapy (CBT) can be helpful. When available there are specific services and teams, for example, pain teams and liaison psychiatric services for patients with severe and chronic symptoms. Complex cases may need case conferences and a multidisciplinary management plan. Prognosis Most medically unexplained symptoms presenting to primary care resolve, but those who are referred to secondary care are more likely to persist. These patients are at risk of iatrogenic harm from exces- sive investigation and unhelpful medical and surgical treatment. FURTHER READING Creed F, et al. (2010). Is there a better term than 'medically unex- plained symptoms'? J Psychosom Res, 68, 5–8. Hatcher S, Arrol B (2008). Assessment and management of medically unexplained symptoms. BMJ, 336, 1124–8. Sharpe M, Carson A (2001). 'Unexplained' somatic symptoms, func- tional syndromes, and somatization: do we need a paradigm shift? Ann Int Med, 134, 926–30. Wessely S, Nimnuan C, Sharpe M (1999). Functional somatic syn- dromes: one or many? Lancet, 354, 936. 26.3.4 Low mood Jane Walker ESSENTIALS Low mood is a very common symptom that is often considered a normal, understandable reaction to serious, disabling, or disfiguring illnesses or treatment. While low mood may indeed be part of the adjustment to adverse circumstances, it may also be the presen- tation of serious psychiatric and medical illnesses requiring active treatment. The most common of these is major depressive disorder, which is a complicating illness in about 10% of patients with chronic medical conditions. Simple questioning can clarify the diagnosis, but sometimes a more detailed psychiatric and medical assessment is required so that the appropriate treatment can be provided. Introduction Low mood is a common symptom in patients with medical illnesses. Despite its prevalence and negative effects, low mood is often over- looked in the medically ill. There are several reasons for this. Patients

 often assume that it is normal to feel low in the context of a medical illness; they may not wish to burden their doctor with something they consider untreatable; and they may believe that admitting to low mood might be taken as a sign of 'not coping', leading to a dis- continuation of their treatment. Clinicians, for their part, often lack confidence in how to assess low mood. Common scenarios Case 1. A 68-year-old, previously fit, man presented to his pri- mary care physician with shortness of breath on exertion. Following investigations he was diagnosed with metastatic lung adenocarcinoma with a prognosis of approximately 12 months. At his chemotherapy appointment he described losing interest in golf and DIY, which he was still physically capable of doing. He felt restless and unable to look forward to anything. The differential diagnosis of the low mood includes adjustment disorder, side ef- fects of chemotherapy, major depressive disorder, and developing organic brain syndrome. Case 2. An 85-year-old woman was admitted to a medical ward with loss of appetite, fatigue, and urinary incontinence. She appeared withdrawn, refused medications, and was reluctant to get out of bed. She responded only minimally during attempts to converse with her. The differential diagnosis of the low mood includes hypoactive de- lirium, dementia, and severe major depressive disorder. Differential diagnosis While the most obvious psychiatric disorder associated with low mood is major depression, other diagnoses must be considered. Major depression is characterized by pervasive low mood that has

persisted for at least two weeks, loss of enjoyment, or motivation, and other symptoms including changes in sleep and appetite. Depression may be a consequence of medical illness, a cause of it, or the two may coexist as a result of common aetiological factors. Occasionally fur- ther assessment will indicate a history of episodes of elevated mood or mania, suggesting a bipolar mood disorder. The main differential diagnosis is that of adjustment disorder. This is a diagnosis used to describe the time-limited psychological symp- toms, including low mood, that occur during adjustment to a diffi- culty such as a new and unpleasant illness. As the term suggests, the symptoms only last while the stressor is present and are neither per- sistent nor severe enough to justify a diagnosis of major depression. However, adjustment disorders can develop into depressive illness and monitoring of the patient's mood is important. Other psychiatric disorders to bear in mind in the differential diagnosis of low mood are alcohol and substance misuse, dementia, and delirium (particularly hypoactive delirium). In addition to the psychiatric disorders just described, several other medical illnesses and their treatments can cause low mood and should be considered when the symptom is interfering with the patient's ability to function (Box 26.3.4.1). The most common of these is thyroid dysfunction, in particular hypothyroidism. Some pharmacological treatments have also been associated with low mood (Box 26.3.4.2). Assessment Assessment should focus on: (a) evaluating the nature and severity of the low mood; (b) determining the presence or absence of psychi- atric disorders; (c) considering other possible medical causes. Starting the conversation Patients may not divulge that they are feeling low, just as they may not report being in pain unless prompted to do so. The clinician therefore needs to have a few stock phrases that they can use to open a conversation about low mood. Open questions such as 'how have you been feeling in yourself/your spirits/your mood?' can be a good way to begin. Patients may, however, be unfamiliar with questions about their emotional well-being and respond with a description of their physical health. In this instance, a closed question about the presence of low mood may be required, for example, 'when patients have this medical problem it can often make them feel down or low, have you found that?' Assessing the nature and severity of low mood It is important to assess whether the patient's low mood is persistent and how severe it is. Having established that the patient feels low or down some of the time, the clinician can go on to ask, 'what is that like for you?' or 'what does it feel like when you get low?' Using the patient's own words for their feelings, even if these are not part Box 26.3.4.1 Common differential diagnoses for patients presenting with low mood Major depression (which may be part of bipolar disorder) Chronic depression Adjustment disorder Alcohol and substance misuse Delirium Dementia Side effects of medication Direct result of medical illness (e.g. hypothyroidism, brain injury) Personality disorder Box 26.3.4.2 Commonly prescribed medications that have been reported to cause low mood ACE inhibitors Anticonvulsants Methyldopa Thiazides Amphotericin Ethionamide Metronidazole Some anticancer drugs β-blockers Calcium channel blockers Corticosteroids Oestrogens Interferon Isotretinoin Metoclopramide Indomethacin Statins Sedative hypnotics

 of the clinician's usual vocabulary, can make the assessment more comfortable for the patient, who will often be explaining how they feel for the first time. How persistent the low mood is can be estab- lished by asking how long the periods of low mood last; in a de- pressive disorder, the mood will be low most of the time. Severity can be assessed using simple questions such as 'how bad does it get when you feel like this?' and by asking the patient how their life has been affected by their low mood—have they stopped doing things they usually would, or stopped enjoying them. Patient-rated ques- tionnaires, such as the PHQ-9, can be used to identify patients with probable major depression or to monitor the severity

of a patient’s low mood, but a questionnaire is never a proper substitute for a clin- ical assessment. Assessing mood when communication is difficult Assessing whether patients have low mood and (if so) how severe that is usually involves a conversation, as described previously. However, there are situations when this can be difficult to achieve, for example, when patients are unable to speak due to a neuro- logical disorder, or when their cognitive impairment prevents them from communicating verbally. In these cases, observation of the patient’s appearance and behaviour is essential. The clinician’s observations should be supplemented with information from a relative, friend, carer, or the patient’s usual clinician. Behaviour such as poor eye contact, tearfulness, and lack of interest in per- sonal appearance suggest a diagnosis of depression, whereas fluctuating consciousness and a fearful appearance may be indi- cators of delirium. Suicide risk assessment If the patient has severe low mood it is necessary to also ask ques- tions about suicidal thoughts. There is no evidence that encouraging patients to talk about such thoughts increases the risk of suicide. Suicide risk assessment should start with a question about the patient’s desire for death, for example, ‘sometimes when people feel low like this, they can start to think that they might be better off dead; do you ever feel like that?’ If the patient denies any wish to die, the as- sessment can stop. However if they agree that, at times they wish they were not alive, the clinician should go on to enquire about thoughts of actively ending their life. An affirmative answer to this question should lead to further enquiry to establish the likelihood of suicidal actions and the factors that may reduce the patient’s risk of suicide. Management The management of low mood depends on the cause. Antidepressant medication, for example, is useful when the patient has major de- pression but there is little evidence for its value in patients with simple low mood. Patients should not be subjected to the potential adverse effects of such drugs if the chance of benefitting is low. There are, however, strategies that may be useful for low mood whatever its cause, such as increasing activity, social engagement, and talking treatment. FURTHER READING Allan C, Ebmeier K (2013). Review of treatment for late-life depres- sion. BJPsych Advances, 19, 302–9. Gilbody S, Sheldon T, Wessely S (2006). Should we screen for depres- sion? Br Med J, 332, 1027–30. Simon GE, Von Korff M (2006). Medical co-morbidity and validity of DSM-IV depression criteria. Psychol Med, 36, 27–36.

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26.4.1 Psychopharmacology in medical practice 6465

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CONTENTS 26.4.1 Psychopharmacology in medical practice 6465 Philip J. Cowen 26.4.2 Psychological treatments 6470 Michael Sharpe and Simon Wessely 26.4.1 Psychopharmacology in medical practice Philip J. Cowen ESSENTIALS Drugs intended to treat psychiatric disorders are referred to as psy- chotropic drugs. The main categories are antidepressants, mood stabilizing drugs, antipsychotic drugs, and antianxiety drugs. These drugs are widely used in medical practice and most clin- icians are likely to have under their care several patients receiving treatment with them. Practitioners therefore need to have an under- standing of both the uses and unwanted effects of psychotropic drugs, and particularly of (1) their interactions with drugs used to treat other medical conditions, (2) characteristic abstinence syndromes that can occur with sudden discontinuation of antidepressants (par- ticularly selective serotonin reuptake inhibitors and venlafaxine) and anxiolytics. Introduction Psychotropic drugs are widely used in medical practice and most clinicians are likely to have under their care several patients re- ceiving treatment with this type of medication (Table 26.4.1.1). Most psychotropic drugs are prescribed for the treatment of depressive or anxiety disorders, reflecting the frequency of these conditions in both primary care and general hospital settings. Similarly, while the principal use of antipsychotic drugs is in the treatment of schizophrenia, such agents are also used in general hospitals in the management of the organic psychoses such as de- lirium and dementia. Finally, while treatment with mood stabilizing drugs, such as lithium, is generally initiated by psychiatrists, patients receiving long-

term treatment with these agents may require treat- ment for coexisting medical conditions, consequently knowledge of the effects of lithium on different body systems and its liability to produce adverse drug interactions will be required. For many psychiatric conditions, particularly anxiety and de- pressive disorders, psychological treatments are often as effective as psychotropic drugs and may have other advantages. Hence, if appro- priate psychological treatments are available, they should be con- sidered as an alternative to, or addition to, drug therapy. Special considerations Overdose Patients may present to medical services with the effects of delib- erate or accidental overdose of psychotropic drugs. Consequently, 26.4 Psychiatric treatments in the medically ill Table 26.4.1.1 Classification of clinical psychotropic drugs Name Examples of agents Indications Antipsychotic Haloperidol Quetiapine Risperidone Acute treatment of schizophrenia and mania, prophylaxis of schizophrenia Antidepressant Fluoxetine Venlafaxine Mirtazapine Major depression (acute treatment and prophylaxis), anxiety disorders, obsessive–compulsive disorder (SSRIs) Mood stabilizer Lithium Valproate Acute treatment of mania, prophylaxis of recurrent mood disorder Anxiolytic Diazepam Lorazepam Short-term relief of anxiety symptoms Hypnotic Temazepam Zopiclone Zolpidem Insomnia

section 26 Psychiatric and drug-related disorders 6466 when prescribing psychotropic drugs, particularly for depressed pa- tients, the risk of overdose should always be considered. If such a risk is present, the practitioner should: (1) ensure that medication is dispensed in small amounts; (2) consider asking a close relative to supervise the medication; (3) use a relatively nontoxic drug, if this is available. Pharmacokinetic factors Most psychotropic drugs are highly lipophilic and are well absorbed from the gastrointestinal tract. They are then metabolized by the liver to water-soluble derivatives that are in turn eliminated by the kidneys, hence the drug half-life will be prolonged in patients with hepatic or renal impairment and in older patients. When psycho- tropic medication is added to another drug treatment the possibility of drug interactions must be considered. For example, some se- lective serotonin reuptake inhibitors (SSRIs) are potent inhibitors of hepatic cytochrome P450 enzymes and can thereby increase plasma levels of drugs such as warfarin. Withdrawal of psychotropic medication Characteristic abstinence syndromes occur with sudden discon- tinuation of antidepressants (particularly SSRIs and venlafaxine) and anxiolytics. The main symptoms are: • Sleep disturbance—insomnia, nightmares • Mood symptoms—irritability, anxiety, emotional lability • Gastrointestinal symptoms—nausea, diarrhoea • Sensory—electric shock sensations, light-headedness, vertigo • Somatic—headache, lethargy, sweating The sudden discontinuation of lithium can provoke a ‘rebound’ mania in bipolar patients. It is therefore prudent to withdraw psy- chotropic drugs slowly whenever possible. It is also important to be able to distinguish withdrawal syndromes from a relapse of the dis- order being treated. Compliance and concordance with treatment Compliance with the prescribed drug regimen is an even greater problem with psychotropic drugs than it is in general therapeutics. Psychoactive drugs frequently have unpleasant side effects. These may be experienced early in treatment and before a therapeutic re- sponse is evident. Furthermore, patients may not see the need for treatment or believe that it can help them. Consequently, the suc- cessful and safe use of medication requires a collaborative relation- ship between patient and doctor. The term ‘concordance’ may be preferred to ‘compliance’, which carries the implicit assumption that the patient’s task is to obey instructions. It is therefore important to understand the patient’s view of their illness as well as of its treat- ment. Careful explanation of the likely benefits of treatment and what to expect, accompanied by written information, can help to ensure that the drugs you prescribe are actually taken. Antidepressant drugs All antidepressant drugs in current use increase

the activity of sero- tonin (5-hydroxytryptamine, 5-HT) and/or noradrenergic neurons in the central nervous system (CNS) through one mechanism or another. The pharmacological actions of both noradrenaline (norepinephrine) and 5-HT in the synapse are terminated by spe- cific reuptake pumps that draw these neurotransmitters back into the presynaptic nerve ending. Most antidepressants potentiate the action of 5-HT and noradrenaline by blocking this reuptake process. Selective serotonin reuptake inhibitors (SSRIs) The actions of SSRIs are confined to blockade of the reuptake of 5- hydroxytryptamine (5-HT) and their use is associated with a sus- tained increase in brain 5-HT neurotransmission. Most commonly used SSRIs These are citalopram, escitalopram, fluoxetine, paroxetine, and sertraline. Indications and use SSRIs are now first-line treatment for moderate to severe depres- sion. They are better tolerated than tricyclic antidepressants, less cardiotoxic, and are relatively safe in overdose. There are few im- portant therapeutic differences between them. If treatment is suc- cessful, it is usual to continue the antidepressant for at least 6 months (so-called continuation therapy). This reduces the risk of early relapse by about half. Some patients with recurrent depressive illness re- quire long-term ‘maintenance’ treatment with antidepressant drugs. Adverse effects The main adverse effects of SSRIs are shown in Table 26.4.1.2. SSRIs can cause activation and agitation early in treatment and there has been controversy as to whether this might be associated with an increased risk of suicidal behaviour. There is some evidence for this in young people and, with the exception of fluoxetine, SSRIs are contraindicated in the treatment of depression in patients less than 18 years old. The evidence for a pro-suicidal effect of SSRIs in adults is more equivocal; at a population level, some studies even show a decreased suicide rate correlating with SSRI prescription. However, it is likely that the initiation of antidepressant drug treat- ment of any kind is associated with some increased risk of self-harm Table 26.4.1.2 Newer antidepressants and their adverse effects Drug Mechanism Adverse effects SSRIs 5-HT reuptake blockade Nausea, insomnia, headache, anxiety, rash, sweating, sexual dysfunction, low sodium state, extrapyramidal movement disorders (rare), seizure (rare) Venlafaxine, duloxetine 5-HT and noradrenaline reuptake blockade Nausea, headache, insomnia, sweating, anxiety, hypertension, sexual dysfunction, seizure (rare), overdose toxicity (venlafaxine) Trazodone 5-HT2-receptor antagonism and α1-adrenoceptor blockade Sedation, dizziness, nausea, postural hypotension, priapism (rare), cardiac arrhythmias (rare), seizure (rare) Mirtazapine 5-HT2/α2-adrenoceptor agonist Sedation, weight gain, abnormal liver function tests, reversible agranulocytosis (rare), seizure (rare)

 in the first weeks of treatment. Depressed patients should there- fore be carefully monitored in the days after starting antidepressant medication and that medication should be prescribed in limited amounts. Drug interactions SSRIs, with the exception of citalopram and escitalopram, slow the metabolism of numerous other drugs including warfarin, theophyl- line, anticonvulsants, antipsychotics, and tricyclic antidepressants. Dangerous interactions, characterized by 5-HT neurotoxicity, have been reported between SSRIs and monoamine oxidase inhibi- tors. SSRIs may also produce 5-HT toxicity in combination with lithium, and with some medical drugs such as tramadol, linezolid, and triptans. SSRIs increase the risk of upper gastrointestinal bleeding, particularly if given in conjunction with nonsteroidal anti-inflammatory drugs (NSAIDs). Newer antidepressants Main drugs These can be classified as (a) selective serotonin-noradrenaline re- uptake inhibitors—duloxetine and venlafaxine; (b) monoamine re- ceptor antagonists—mirtazapine and trazodone. Venlafaxine is a potent blocker of 5-HT reuptake and at higher doses blocks the reuptake of noradrenaline as well. Duloxetine has a similar action. Both trazodone and mirtazapine are 5-HT2 re- ceptor antagonists and block α1-

adrenoceptors in addition, which gives them a sedating profile. Mirtazapine also blocks inhibitory presynaptic α2-adrenoceptors, resulting in an increased release of noradrenaline. Indications and use These antidepressants can be used to treat patients in whom SSRIs are poorly tolerated or found to be ineffective. With the exception of venlafaxine, these drugs lack significant cardiotoxicity and are rela- tively safe in overdose. Adverse effects The main adverse effects of the other, newer antidepressants are shown in Table 26.4.1.2. The major distinction between compounds is whether they are sedating. Drug interactions Duloxetine and venlafaxine, like SSRIs, potentiate 5-HT function and therefore can cause serious 5-HT neurotoxicity. Trazodone and mirtazapine may increase the sedative effects of other centrally acting drugs. Tricyclic antidepressants Tricyclic antidepressants (TCAs) inhibit the neuronal uptake of nor- adrenaline and 5-HT. They have numerous other pharmacological properties, which contribute to their adverse effects rather than their therapeutic activity. However, some of these adverse effects (e.g. sed- ation) can prove beneficial in certain circumstances. Main drugs These are amitriptyline, clomipramine, lofepramine, and nortriptyline. Indications and use Tricyclic antidepressants are now little used for the treatment of de- pression, but are still widely prescribed at relatively low doses as ad- juncts for the management of pain and insomnia. Adverse effects These are listed in Table 26.4.1.3. Drug interactions The ability of TCAs to block noradrenaline reuptake can lead to hypertension with systemically administered noradrenaline and adrenaline (epinephrine). Tricyclic antidepressants should not be used in conjunction with antiarrhythmic drugs, particularly amiodarone. Numerous other drugs including sodium valproate, calcium channel blockers, and SSRIs can increase the plasma levels of tricyclic antidepressants. Mood stabilizing drugs Lithium Lithium salts have inhibitory effects on receptor-transduction systems, particularly second messengers such as cAMP and phosphoinositol. The main uses of lithium are: • prophylaxis of recurrent mood disorders, especially manic de- pressive illness • acute treatment of mania • augmentation of antidepressant medication in patients with re- sistant depression Lithium remains a leading pharmacological treatment for the main- tenance phase of bipolar disorder. However, because of its potential toxicity and limited tolerability, anticonvulsant treatments and atyp- ical antipsychotic drugs are increasingly used for this purpose. The excretion of lithium from the body is critically dependent on the kidneys. Since there is little margin between therapeutic serum levels of lithium (0.5–0.8 mmol/litre) and those causing toxicity (>1.2 mmol/litre) clinical and laboratory assessment of renal func- tion should be done before starting treatment. Renal function tests

Table 26.4.1.3 Adverse effects of tricyclic antidepressants

Pharmacological action	Adverse effects
Muscarinic receptor blockade (anticholinergic)	Dry mouth, tachycardia, blurred vision, glaucoma, constipation, urinary retention, sexual dysfunction, cognitive impairment
α1-Adrenoceptor blockade	Drowsiness, postural hypotension, sexual dysfunction, cognitive impairment
Histamine H1 receptor blockade	Drowsiness, weight gain
Membrane stabilizing properties	Cardiac conduction defects, cardiac arrhythmias, epileptic seizures, overdose toxicity
Other	Rash, oedema, leucopenia, elevated liver enzymes

 should include urinalysis and measurement of plasma creatinine and electrolyte levels: care should be taken if there is any suggestion of impaired renal function (reduced estimated GFR (eGFR)). In the absence of clinical indications, it is usually sufficient to check lithium levels every three months and to repeat renal func- tion tests every six months. Lithium can also cause hypothyroidism, so thyroid function tests should be done prior to treatment and at six-monthly intervals thereafter. If necessary, thyroxine replacement therapy can be added. Sudden withdrawal of lithium in patients with bipolar disorder can cause an

acute rebound mania and should therefore be avoided if possible. Adverse effects The side effects of lithium are shown in Table 26.4.1.4. The most important are a result of the effect on the kidneys. Some degree of thirst and polyuria is common, and a few patients de- velop nephrogenic diabetes insipidus, probably caused by lithium blocking the effect of antidiuretic hormone on the renal tubule. Most patients taking lithium have a demonstrable impairment of tubular concentrating ability, although this is rarely of clinical sig- nificance. Glomerular function is less affected by lithium, but glom- erular damage and interstitial fibrosis have been reported following lithium toxicity. While long-term lithium treatment, even at thera- peutic plasma levels, can cause long-term renal impairment and renal failure, this risk can be minimized by maintaining the serum concentration within the therapeutic range. An increasing level of creatinine/decreasing level of eGFR (a fall of more than 4 ml/min per year, or to a value <30 ml/min) should prompt review by a renal physician. Drug interactions The narrow therapeutic index of lithium means that drug inter- actions that raise serum lithium levels can have serious clinical consequences. Important interactions can occur with diuretics, NSAIDs, ACE inhibitors, and angiotensin II receptor antagonists, all of which may increase lithium levels. Lithium levels may be in- creased by metronidazole and lowered by theophylline and antacids. While the effects of lithium on cardiac conduction are usually con- sidered benign, it may potentiate the effects of cardiac glycosides on conduction. Toxicity Acute lithium toxicity usually appears at a serum level above 1.2 mmol/litre. Early signs are coarse tremor, drowsiness, and dys- arthria. Higher plasma concentrations (>2.0 mmol/litre) can lead to seizures, coma, and death. Since lithium toxicity is potentially fatal, any suspicion of intoxication should lead to the immediate with- drawal of lithium treatment and close monitoring of serum lithium and plasma electrolyte and creatinine concentrations. Severely ill patients with high serum lithium levels may require dialysis. Sodium valproate Valproate is a simple branched-chain fatty acid with a mode of ac- tion that is unclear, although there is some evidence that it can slow the breakdown of the inhibitory neurotransmitter γ-aminobutyric acid (GABA). This action could account for its anticonvulsant properties, but whether it also underlies the psychotropic effects is unclear. Indications and use Valproate is effective in the management of acute mania and in the longer-term prophylaxis of bipolar disorder. Valproate can be started at a dose of 200–400 mg daily, which may be increased once or twice weekly to between 1 and 2 g daily. Plasma levels of val- proate do not correlate well with either its anticonvulsant or mood stabilizing effects, but it has been suggested that efficacy in the treat- ment of mood disorders is usually apparent when plasma levels are above 50 µg/ml. Side effects Common side effects of valproate include gastrointestinal disturb- ances, tremor, sedation, weight gain, and transient hair loss. Serious side effects are rare, but fatal hepatic toxicity and acute pancreatitis can occur. Valproate may also cause thrombocytopenia and inhibit platelet aggregation, and increases in plasma ammonia can occur. Drug interactions Valproate potentiates the effects of central sedatives. It can in- crease the side effects of other anticonvulsants (without necessarily improving anticonvulsant control). It may increase plasma levels of phenytoin and TCAs. Other drugs Although not licensed for this indication in the United Kingdom, the anticonvulsant drug lamotrigine is increasingly used to treat depression in patients with bipolar disorder. Atypical anti- psychotic drugs such as quetiapine are also being used to treat bi- polar disorder. Antipsychotic drugs Antipsychotic drugs, also known as major tranquillizers or neuro- leptics, are a group of agents of varied structure used to treat schizophrenia and other psychoses. All antipsychotic agents have in common the ability to block dopamine receptors in the cen- tral nervous system, and it is likely that their antipsychotic effect is caused by blockade of dopamine D2 receptors in mesolimbic

Table 26.4.1.4 Adverse effects of lithium Central nervous system Drowsiness, lethargy, headache,

memory impairment, fine tremor Cardiovascular system Conduction defects (rare) Gastrointestinal system Nausea, vomiting, diarrhoea Genitourinary system Polydipsia, polyuria, nephrogenic diabetes insipidus Endocrine system Hypothyroidism (T4 ↓ TSH ↑), hyperglycaemia, hyperparathyroidism Other Leucocytosis, skin rash, weight gain Signs of toxicity (plasma level: >1.2 mmol/litre) Nausea, vomiting, coarse tremor, drowsiness, dysarthria, seizures, coma, renal failure, cardiovascular collapse T4, thyroxine; TSH, thyroid stimulating hormone.

26.4.1 Psychopharmacology in medical practice 6469 regions of the brain. Blockade of D2 receptors in striatum explains the common occurrence of various kinds of extrapyramidal movement disorders. The newer so-called ‘atypical’ antipsychotic drugs have a varied pharmacology, but are less likely to produce extrapyramidal side effects at therapeutic doses than conventional agents such as halo- peridol. Some atypical agents such as amisulpride, are highly selective dopamine D2 receptor antagonists with selectivity for mesolimbic dopamine receptors. Others (e.g. risperidone, olanzapine, and quetiapine) have high affinities for the 5-HT2 receptor that exceed their affinities for the D2 receptor. Main drugs These are: (a) the conventional (typical) antipsychotic drugs— chlorpromazine, haloperidol, flupentixol, fluphenazine; (b) atyp- ical antipsychotic drugs—amisulpride, aripiprazole, clozapine, olanzapine, quetiapine, and risperidone. Indications and use The main use of antipsychotic drugs is to treat schizophrenia. They are also used to treat mania and are sometimes given to depressed patients who have psychotic symptoms or who are particularly agi- tated. Some atypical antipsychotic drugs (for example, quetiapine and olanzapine) are helpful in the maintenance treatment of bipolar disorder and quetiapine has useful effects in the acute treatment of bipolar depression. Antipsychotic drugs are also used in the management of disturbed behaviour arising from other medical causes (e.g. confusional states), but their use as nonspecific tranquillizing agents should be short-term only because of their potentially ser- ious side effects. Some groups of demented patients (particularly those with Lewy body type dementia) can suffer severe extra- pyramidal effects from comparatively low doses of antipsychotic drugs. Patients with dementia also appear to be at increased risk of adverse cardiovascular events, particularly stroke, during anti- psychotic drug treatment. Antipsychotic drugs increase the risk of thromboembolic disease. Clozapine can be effective in up to 30% of patients with schizo- phrenia whose symptoms have not responded to other antipsychotic drugs (both typical and atypical). Notably it is effective in the treat- ment of both positive and negative symptoms of schizophrenia; the latter often responding poorly to other antipsychotic drugs. Adverse effects Abnormal movements Through their blockade of brain dopamine receptors, typical anti- psychotic drugs commonly produce a variety of extrapyramidal movement disorders that can mimic signs of basal ganglia disease, for example, acute dystonia and parkinsonism. The treatment of these movement disorders is by a reduction in dosage of the anti- psychotic drug or by the introduction of anticholinergic medica- tion such as benztropine. After a period of treatment, tardive (late onset) dyskinesia may develop. This consists of involuntary repeti- tive movements, usually involving the tongue and lips, though other parts of the body may be involved. Unfortunately, these movements are hard to treat and anticholinergic medication may make them worse. If possible, the antipsychotic drug should be stopped; this de- cision is often difficult because of the risk of relapse of the psychiatric disorder it is being used to treat. Atypical antipsychotic drugs are less likely to cause movement disorders including tardive dyskinesia. Weight gain Many antipsychotic drugs can cause weight gain; the risk is greatest with atypical agents, particularly clozapine, olanzapine, and quetiapine. These drugs are also associated with a greater risk of type 2 diabetes than conventional agents, as well as disturbances in lipid profile.

Patients taking atypical antipsychotics should therefore be monitored for weight gain and disturbances in glucose and lipid metabolism. Neuroleptic malignant syndrome Neuroleptic malignant syndrome is a rare but potentially very ser- ious reaction to antipsychotic drugs. It is characterized by fever, muscular rigidity, altered consciousness, tachycardia, and labile blood pressure. Abnormal investigations include leucocytosis and markedly raised creatinine phosphokinase. Management is by im- mediate withdrawal of the antipsychotic drug. The drugs bromo- criptine and dantrolene may be helpful. If there are cardiovascular, respiratory, and renal complications, ICU support may be required. The most common adverse effects of atypical antipsychotic drugs are shown in Table 26.4.1.5. Drug interactions Antipsychotic drugs potentiate the effects of other central sedatives. They may delay the hepatic metabolism of TCAs and antiepileptic drugs, leading to increased plasma levels of these agents. Clozapine Table 26.4.1.5 Adverse effects of atypical antipsychotic drugs Drug EPS Prolactin Weight gain Adverse effects Amisulpiride + ↑ + Insomnia, agitation, nausea, constipation, QT prolongation (rare) Clozapine 0 0 +++ Agranulocytosis—regular white cell monitoring mandatory, myocarditis and myopathy (rare), fatigue, drowsiness, hypersalivation, sweating, tachycardia, postural hypotension, nausea, constipation, ileus, urinary retention, diabetes Olanzapine +/0 0 +++ Somnolence, dizziness, oedema, hypotension, dry mouth, constipation, diabetes Quetiapine 0 0 ++ Somnolence, dizziness, postural hypotension, dry mouth, abnormal liver function tests, QT prolongation, diabetes Risperidone + ↑ + Insomnia, agitation, anxiety, headache, impaired concentration, nausea, abdominal pain 0, not present; +, sometimes; ++, often; +++, can be excessive; EPS, extrapyramidal symptoms.

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section 26 Psychiatric and drug-related disorders 6470 should not be given with any agent likely to potentiate its depressant effect on the white cell count such as carbamazepine, co-trimoxazole, and penicillamine. SSRIs slow the hepatic metabolism and increase blood levels of several antipsychotic drugs, including haloperidol, risperidone, and clozapine. Antianxiety agents Benzodiazepines Benzodiazepines enhance the action of the neurotransmitter γ- aminobutyric acid (GABA) in the central nervous system binding to a specific benzodiazepine receptor located in a complex with a GABA receptor and a chloride ion channel. The pharmacological effects of benzodiazepines are attributed to the facilitation of GABA neurotransmission. Main drugs These are diazepam, lorazepam, and temazepam. Indications and use The prescription of benzodiazepines is decreasing following con- cern about their liability to produce dependence with long-term use. Alternative therapies are available for chronic anxiety related disorders, and it is recommended that benzodiazepine treatment of anxiety and insomnia should be limited to two weeks only. The main indication for the use of benzodiazepines is for patients with acute stress reaction and adjustment disorders in which anxiety and in- somnia are reducing their ability to cope. Patients should be advised that the drug treatment will only be of short duration. All benzodiazepines have hypnotic and anxiolytic properties; the main difference between them of clinical importance is their length of action. Derivatives with short half-lives, such as temazepam, are suitable hypnotics because of their relative lack of a hangover effect. Other benzodiazepines (e.g. diazepam) have long half-lives and are metabolized to active compounds. They either may be used for the treatment of anxiety, in the form of regular dosing, or in the now preferred ‘as required’ basis with an agreed maximum daily dose. Side effects and interactions Benzodiazepines have a low acute toxicity. Their adverse effects are extensions of their clinical effects and include drowsiness,

psycho- motor impairment, dizziness, ataxia, and paradoxical aggression (rare). Benzodiazepines potentiate the effects of other centrally acting sedatives, particularly alcohol. The effects of benzodiazepines are potentiated by cimetidine. Patients who have taken clinical doses of a benzodiazepine for more than a few weeks may show a withdrawal syndrome when the medication is stopped. This syndrome resembles an anxiety state, but perceptual disturbances and dysphoria may also occur. It is thus apparent that benzodiazepines can cause physical dependence, and patients frequently find it difficult to stop their medication. A gradual reduction in dose is usually best. Zopiclone, zolpidem, zaleplon (the Z drugs) The 'Z drugs' are nonbenzodiazepine agents with short half-lives that also increase GABA function by binding to the benzodiazepine - receptor and are licensed as hypnotics. The treatment of insomnia with either benzodiazepines or the Z drugs should be short-term to avoid dependence. Other drugs SSRIs are effective in the management of a range of anxiety dis- orders, including generalized anxiety, and phobic states. SSRIs are also effective in the treatment of obsessive–compulsive disorder. FURTHER READING Baldwin DS, et al. (2014). Evidence-based guidelines for the pharma- cological treatment of anxiety disorders, post-traumatic stress dis- order and obsessive compulsive disorder: a revision of the 2005 guidelines from the British Association of Psychopharmacology. J Psychopharmacol, 28, 403–39. Cleare A, et al. (2015). Evidence based guidelines for treating depres- sive disorders with antidepressants: a revision of the 2008 British Association for Psychopharmacology guidelines. J Psychopharmacol, 29, 459–525. Goodwin GM, et al. (2016). Evidence-based guidelines for treating bipolar disorder: revised third edition—recommendations from the British Association of Psychopharmacology. J Psychopharmacol, 30, 495–553. Harrison P, Cowen P, Burns T, Fazel M (2018). Drugs and other physical treatments. In: Harrison P, et al. (eds), The shorter Oxford textbook of psy- chiatry, OUP, 7th edition, pp. 709–75. Oxford University Press, Oxford. Stahl SM (2013). Essential psychopharmacology, 4th edition. Cambridge University Press, Cambridge. Taylor D, Barnes TRE, Young AH (2018). The Maudsley prescribing guidelines, 13th edition. Wiley Blackwell, Chichester. 26.4.2 Psychological treatments Michael Sharpe and Simon Wessely ESSENTIALS Psychological treatments, sometimes called psychotherapies or talking treatments, refer to the use of psychological, as opposed to pharma- cological or surgical methods, to treat an illness or improve a person's well-being. They may be regarded as general or specific in type. General psychological treatments, such as listening to the patient and providing reassurance, are a core aspect of general medical prac- tice as all medical interactions will have a psychological impact on the patient, whether for good or ill. Specific psychological therapies, which are usually given by trained therapists, are important treatments for psychiatric illnesses such as depression and anxiety. Consequently, it is important that physicians both know how to make their consult- ations generally psychotherapeutic and about specific psychological treatments, so that they can refer patients appropriately for these. What is psychological treatment? Psychological or talking treatments are also referred to as psychotherapies. They target the patient's psychological processes

26.4.2 Psychological treatments 6471 with the aim of improving their well-being. They are delivered mainly by listening and talking, and increasingly also via digital media. They aim to help patients to change their understanding, emotional response to and behaviour towards their illness or situation. General psychological treatments, such as listening to the patient and pro- viding reassurance, are a core aspect of general medical practice as all medical interactions will have a psychological impact on the pa- tient, whether for good or ill. In this sense, all doctors, whether they know it or not, are in the business of delivering psychotherapy. Specific psychological

treatments are more intensive and tailored interventions designed to treat specific problems or illnesses. There is a wide variety of ‘psychotherapies’ including counselling, psycho- dynamic, and various forms of cognitive behavioural therapy (CBT). Specific psychological treatment is an important and evidence- based method of treating many psychiatric illnesses and other psychological problems, including those that may complicate general medical care. The psychotherapeutic medical consultation The medical consultation is a psychotherapeutic opportunity. This was perhaps better understood when physicians had less to offer, and indeed to do, in terms of carrying out biological investigations and treatments. There was then a greater need, and opportunity, to seek benefit from simply listening to and talking with the patient. However, despite the power of modern medicine’s pharmacological and surgical treatments, psychotherapeutic aspects of the consult- ation remain important to the effective practice of medicine. This is especially the case when there is diagnostic uncertainty, a need for the patient to adhere to a treatment regimen, or when the patient has coexisting psychiatric illness or distress. Psychotherapeutic consultations (doing good) Key requirements for a positively psychotherapeutic consultation are shown in Box 26.4.2.1. Although many medical encounters are suboptimal in delivering these ingredients, they can be easily improved by simply fol- lowing the recommendations summarized in Table 26.4.2.1 and described next. Preparing well If possible read the patient’s notes in advance and decide how you can best use the consultation therapeutically, and not simply to gather data (much of which may already be recorded). Pay attention to the physical arrangements for the consultation. The days when patients were told that they have cancer on an open ward round may have gone, but many consultations still offer scant privacy and provide little real opportunity for the patient to ask ques- tions. Preparation for the right place and time helps to make best use of the consultation. It is important that the need for time and privacy is recognized and if necessary insisted on by the physician despite institutional pressures. Time with the patient is an essen- tial therapeutic tool that, like a drug, will only work if given in an appropriate dose. Listening well Taking an interest in the patient’s symptoms (even those that are not of diagnostic value) and their fears about these (even if they appear illogical) is important for two reasons. First, it helps the pa- tient to feel that their concerns have been heard, resulting in better adherence to the physician’s advice. Second, effective reassurance requires learning what it is that the patient fears. Time spent on such matters is therefore a critical means for helping the patient to feel better. Explaining well A clear explanation of the physician’s understanding of the patient’s problem is required. While it may sound obvious, this requires a clear statement and explanation of the diagnosis when- ever possible. All too often patients complain that doctors have told them what they did not have, but not what they did have. This most often happens when the patient’s complaints are not adequately explained by identifiable disease (medically unex- plained) (see Chapter 26.3.3). Making a shared plan Even when a clear diagnosis or specific treatment cannot be given, a positive plan of action usually can. There is evidence that such a positive approach has a beneficial effect. The provision of hope, the agreement on a practical plan, and an expectation of improvement in at least some aspects of the illness, have long been key ingredients of an effective doctor–patient relationship. Although the hope offered should not be false (e.g. if the patient has a terminal condi- tion, it is clearly unhelpful to pretend otherwise), the message given to the patient can still be a positive one (e.g. the symptoms will be managed and the doctor will provide ongoing help). A written sum- mary of the plan, perhaps as a copy of the letter to another doctor, is usually helpful. Box 26.4.2.1 Psychotherapeutic imperatives for the medical consultation • Establish a good, confiding, and collaborative relationship with the patient. • Convince the patient that whatever the nature of their problem, you can be trusted to help with it.

• Offer an acceptable and convincing explanation for what is wrong. • Provide a positive and credible plan of action for addressing the problem. Table 26.4.2.1 Tasks for the physician in the medical consultation Prepare Ensure adequate time and privacy for the consultation, and that you have the information you need. Listen Listen to the patient's concerns about symptoms and accept these as problems in their own right and not only as pointers to disease. Explain Explain what you understand to be wrong, including a diagnosis. Reassure about unfounded worries and provide appropriate optimism. Plan Agree a plan with the patient with actions for both them and for you. Ensure that they both understand and feel understood. Summarize the plan in writing.

section 26 Psychiatric and drug-related disorders 6472 Psychological iatrogenesis (doing harm) Like all treatments, the consultation has the potential to do psycho- logical harm as well as good. Iatrogenesis can result not only from prescribing the wrong drug or doing the wrong operation, but also from what doctors say to their patients. Poor listening Appearing not to hear and accept the patient's account of their suffering can cause harm. For example, by telling a patient with medically unexplained symptoms, 'there is nothing wrong with you'. This may not only damage your relationship with the patient, but may also send him or her into the arms of less scrupulous practitioners. Unhelpful explanations Ill-considered or unhelpful explanations for the illness; for example, telling the person who is depressed that it's 'probably a virus', or a person with back pain that they have a 'weak ligament' send false messages about why they are unwell. It will also influence what treatment they should seek and may worsen the clinical outcome by influencing their behaviour. Unrealistic prognostication Both excessively optimistic predictions; for example, telling a pa- tient who has not yet been adequately assessed 'I'm sure it's nothing serious' and excessively pessimistic predictions (e.g. telling a person with possible multiple sclerosis 'it's probably best if you just come to terms with the idea of a wheelchair now') may be harmful. Both risk loss of credibility of the physician if the predictions are not fulfilled. They may also lead to the patient acting on inaccurate information and to unnecessary distress. Harmful advice Poorly thought out or ill-informed advice can do more harm than might be imagined. A compelling demonstration of this type of problem was found in a study of schoolchildren whose parents were told (sometimes incorrectly) that their children had abnormal hearts and should avoid exertion: at follow up many years later, the children with normal hearts whose parents were warned incorrectly about activity were restricting their activity as much as those with heart disease. Specific psychological treatments Specific psychological treatments may be broadly divided into the following types: (a) simple brief therapies, usually given over one to less than 10 sessions by a person with modest training; (b) more complex but usually brief psychotherapies, such as CBT, which may be given over 6 to as many as 20 sessions and require a highly trained therapist; (c) longer-term treatments such as psychodynamic psy- chotherapy, which may be given over months or years and require a very high level of therapist skill. See Table 26.4.2.2. Specific psychotherapies are an important tool in the treat- ment of psychiatric illnesses. They also have a potentially im- portant role in the management of medical illness by providing evidence-based treatments for symptoms such as fatigue and pain, reducing emotional distress, and improving adherence to medical treatments. There is a strong argument that many patients would benefit from better integration of these psychotherapies into their medical care. Simple brief therapies Brief counselling Counselling, usually given by trained councillors, can help patients to express distress and talk through problems such as a diagnosis of cancer. However, basic counselling should also be regarded as a gen- eric skill that all doctors and nurses are able to provide. Motivational interviewing This is a simple technique to encourage behaviour change. It aims to help

the patient clarify what they want to achieve, then to con- sider the advantages and disadvantages of specific behaviours as ways of achieving it. It can be delivered during a single extended consultation. Originally developed to help people reduce problem drinking, it has wider application to many situations where behav- iour change is required, such as improving adherence to medical treatment. Problem solving therapy A brief (typically six to eight sessions) simple psychological treat- ment that aims to help patients feel more in control of the practical problems they face. It teaches them to define their problems clearly, to tackle them one at a time, and to work out clear strategies to over- come them. It is effective for treating depression. Behavioural activation
A simple therapy that helps patients to become generally more ac- tive and specifically to overcome avoidance of important activities. When given by a trained therapist, it is effective in the treatment of depression. Complex but usually brief therapies Cognitive behaviour therapy (CBT)
CBT is a complex therapy usually given over 6–20 sessions. It re- quires a skilled therapist. The cognitive part refers to helping the patient to re-evaluate and optimize their thinking, for example, countering excessive pessimism about their medical condition. Table 26.4.2.2 Commonly used psychotherapies Simple brief therapies • Brief counselling • Motivational interviewing • Problem solving • Behavioural activation Complex but usually brief therapies • Cognitive behaviour therapy • Acceptance and commitment therapy • Mindfulness training • Interpersonal therapy Longer-term treatments • Long-term counselling • Psychoanalysis • Long-term forms of CBT

 The behavioural part involves helping them to cope more ef- fectively by reducing unhelpful behaviours such as excessive checking of symptoms or avoidance of activities. It is effective in the treatment of patients with depression, anxiety, and panic disorders and in the treatment of medically unexplained or func- tional symptoms. Mindfulness training Mindfulness is not really a therapy, but rather training in a skill. It aims to help the patient develop ‘mindfulness’; the psychological pro- cess of focusing attention on only those internal and external experi- ences occurring in the present moment and accepting rather than judging these. It requires prolonged diligent practice. It is currently being widely advocated for several problems. The strongest evidence of its efficacy is in the prevention of relapse in patients with depres- sion. The evidence to support its many other potential applications, such as the treatment of symptoms and occupational stress, is weaker. Acceptance and commitment therapy This is a form of CBT, which also includes elements of mindfulness. It has two main components: the first is helping the patient to ac- cept their thoughts, emotions, and symptoms and not to challenge or struggle against them. The second is to encourage the patient to commit to changing their behaviour, however they feel. An example might be accepting pain as incurable; to accept rather than resent it and to commit to re-establishing previously valued activities, even if this increases pain. The evidence of efficacy is strongest in the man- agement of chronic pain. Interpersonal therapy This short-term therapy focuses on helping the patient to under- stand their personal relationships and how these relate to the prob- lems they have. They are then helped to make necessary changes. An example may be a patient gaining understanding of how they allow themselves to become excessively passive when ill, in part as a response to an oversolicitous partner. The evidence of efficacy is strongest for depression. Complex longer-term therapies Long-term counselling This is supportive listening for someone with a long-term problem. Sessions may be spread over a long period, perhaps monthly for a year or more. It may be of value in prolonged adjustment disorders such as to a severe illness. It is not an effective treatment for more severe problems such as major depressive disorder. Psychodynamic therapy For people with problems not amenable to a brief therapy, such as those with major personality difficulties, there is a case for longer- term

psychological therapy. One well-established type of long- term therapy is psychodynamic psychotherapy. This is a modern derivative of classical psychoanalysis and typically focused on the relationship of current difficulties to experiences in childhood and relationships with parents. It may last for many months or even years. However, the availability of such therapy is limited and the evidence for its effectiveness is modest. Long-term forms of CBT Not all forms of CBT are brief. Long-term CBT is used to treat more severe problems such as personality disorder. For example, there is evidence that a form of CBT called dialectic behaviour therapy helps to improve the functioning of people with a form of personality disorder called borderline personality disorder. This therapy uses the relationship between patient and therapist to produce therapeutic change and requires a high level of skill to deliver. Making a referral for a specific psychological treatment When considering a referral of a patient for psychological treatment, the first requirement is to find out what services are available and what types of referrals are accepted by these services. The second requirement is to make sure that the patient understands why they have been referred. The third requirement is to explain the referral to the patient in a way that makes it likely that they will attend, at least for an initial assessment. Identifying psychological treatment services Psychological treatment services would ideally be located in or- ganizational and geographical proximity to where medical con- sultations takes place; a psychotherapist in every clinic. In reality they rarely are. It is therefore desirable for the physician to famil- iarize themselves with what is provided by other organizations, how long the patient will have to wait, and what kind of refer- rals are likely to be accepted, before the need to make a referral arises. Making the referral It is often helpful to discuss the type of problem being referred with the service to ensure it will be accepted, before telling the patient. For example, the patient's psychological problems may appear ob- viously in need of treatment to the physician, but regarded as an untreatable personality disorder by a service providing only brief therapy. If medical investigation or treatment is ongoing, it will help if any uncertainties in diagnosis or prognosis are made explicit in the referral letter, together with the physician's plan for follow up of the patient. Explaining the referral to the patient While telling the patient that they are being referred sounds simple, it is most likely to be successful if care is taken when doing it. First, and perhaps most important, is the need to make it clear that you are not implying that the illness is 'imaginary' or 'all in the mind'. Rather, it can be explained that, as with almost all sick people, there is an understandable psychological aspect to their problems that deserves attention. Second, it helps to convey a positive attitude towards psy- chotherapy as a sensible treatment approach with a good chance of helping. It is even better if you can explain to the patient what they can expect during the therapy. Finally, it is important, if appropriate, to make sure the patient knows that, if required, you will see them after the psychological treatment has finished, thereby making it

section 26 Psychiatric and drug-related disorders 6474 clear that you regard the referral as a useful addition to care and not simply as a way of 'getting rid of the patient'. FURTHER READING Burns T (2015). Psychotherapy: a very short introduction (very short introductions). Oxford University Press, Oxford. Farias M, Wikholm C, Delmonte R (2016). What is mindfulness-based therapy good for? Lancet Psychiatry, 3, 1012–3. Frank JD (1967). Persuasion and healing: a comparative study of psycho- therapy. The Johns Hopkins University Press, Baltimore, MD. Miller WR, Rollnick S (2013). Motivational interviewing: helping people change, 3rd edition. The Guilford Press, New York, NY. Thomas KB (1987). General practice consultations: is there any point in being positive? BMJ, 294, 1200–2.

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CONTENTS 26.5.1 Delirium 6475 Bart Sheehan 26.5.2 Dementia 6478 Bart Sheehan 26.5.3 Organic psychoses 6482 Curtis McKnight and Jason Caplan 26.5.4 Alcohol misuse 6486 Jonathan Wood 26.5.5 Substance misuse 6490 Stephen Potts 26.5.6 Depressive disorder 6493 Joseph Cerimele and Lydia Chwastiak 26.5.7 Bipolar disorder 6498 Kate E.A. Saunders and John Geddes 26.5.8 Anxiety disorders 6501 Ted Liao and Steve Epstein 26.5.9 Acute stress disorder, adjustment disorders, and post-traumatic stress disorder 6506 Jonathan I. Bisson 26.5.10 Eating disorders 6509 Christopher G. Fairburn 26.5.11 Schizophrenia 6513 Stephen M. Lawrie 26.5.12 Somatic symptom and related disorders 6517 Michael Sharpe 26.5.13 Personality disorders 6520 Iain Jordan 26.5.1 Delirium Bart Sheehan ESSENTIALS Delirium is one of the most common psychiatric problems encoun- tered in elderly medical inpatients. It involves a fluctuating cognitive impairment with reduced alertness and often with poorly formed delusions and/or visual hallucinations. The main differential diag- nosis is from dementia, although delirium is more likely to develop in patients with existing dementia. Almost any medical condition that affects brain function may cause delirium. Infection is the most common cause, and it is im- portant to consider prescribed drugs as a cause and to remember drug and alcohol withdrawal. Imperatives in management are first to keep the patient safe from harm (they may wander or put them- selves in danger), and second to find and correct the cause. Urgent medical investigation and treatment is required as long periods of delirium put the patient at risk of harm, including permanent cogni- tive impairment. Introduction Delirium is the main cause of acute decline in cognitive function and may be thought of as ‘acute brain failure’. It is caused by either a direct insult to the brain (such as prolonged status epilepticus or a brain abscess) or the response of a vulnerable brain to a systemic insult (e.g. a patient with Alzheimer’s disease who becomes acutely confused when developing a urinary tract infection). The subjective experience of an episode of delirium is sometimes later recalled; even if lacking dramatic symptoms like hallucinations and delu- sions, patients may report feeling puzzled, frightened, and unable to comprehend sensory inputs. Aetiology Table 26.5.1.1 lists common

causes of delirium. The profile of a high- risk patient is well-established: older people with existing dementia, sensory impairment, and a history of previous stroke, depression, alcohol abuse, or delirium. Precipitating factors may be directly and sufficiently causal; for example, a new anticholinergic drug, status epilepticus, and se- vere alcohol withdrawal. In many cases the precipitating factor may seem insufficient to provoke a delirium, leading to suspicion that a vulnerable brain (for example due to dementia or previous stroke) combined with an abnormal neuro-inflammatory or al- tered neurotransmitter response to external insult has triggered the syndrome. 26.5 Specific psychiatric disorders

SECTION 26 Psychiatric and drug-related disorders 6476 Animal and human experimental work increasingly support this hypothesis; thus insults such as an anticholinergic drug, or using high dose lipopolysaccharides to mimic the effects of sepsis, lead to clinical syndromes resembling delirium in vulnerable animals. In humans, stress responses to insults, including elevated circu- lating glucocorticoids, or exaggerated blood and cerebrospinal fluid (CSF) cytokine responses, are hypothesized to mediate the physio- logical pathway leading to the clinical signs of delirium, which may themselves be mediated by altered cholinergic and monoaminergic neurotransmission. There may be multiple causes. Epidemiology Delirium is probably the psychiatric condition most frequently rec- ognized in general hospitals, though cases occur in other settings. It has been most studied in general hospitals, where prevalence figures of 15–25% are typically found on orthopaedic, geratology, and gen- eral medical wards. The highest prevalence (up to 50%) is found in postsurgical intensive care unit (ITU), and in palliative care wards. The prevalence in nursing home settings is around 10–15%. In the community the prevalence is probably only 1–2%. Clinical features Box 26.5.1.1 outlines the diagnostic features of delirium. The car- dinal criteria are inattention and reduced awareness of the environ- ment. Recent criteria emphasize disorientation to the environment as evidence of reduced awareness, acute change compared to base- line function, and the broadening of aetiologies to include sub- stance misuse and toxins. Fluctuation, often worse at night, and visual hallucinations, often of a frightening nature, are common. The patient may exhibit a hyperactive form with agitation and dis- turbed behaviour, or sometimes a hypoactive form with reduced activity Differential diagnosis The main differential diagnosis is from dementia. Other differentials to consider are brain lesions such as concussion and cerebral malig- nancy (primary and secondary). Delusions and hallucinations occur in acute functional psychoses (though less often visual in nature). The overactivity of mania may suggest hyperactive delirium and the inactivity of depression hypoactive delirium, a key difference being the reduced consciousness level in delirium. Drug and alcohol in- toxication can cause a similar picture to delirium, but their presence is often obvious. Clinical investigation Delirium is often not recognized and as many as two-thirds of cases are missed. The diagnosis is more likely to be made if the patient has the overactive rather than underactive form. Clinical experience is often essential to recognize the signs in more subtle presentations. Key to the diagnosis is the recognition of the core clinical features, especially inattention and fluctuating conscious- ness. These are emphasized in the published diagnostic criteria such as ICD-10 and DSM-5. There are instruments available to support the diagnosis such as the Confusion Assessment Method (CAM) which focuses on acute onset and fluctuating course, and inattention, supported by disorganized thinking and altered con- sciousness. At the very least, a test of attention (e.g. counting back from 20) and of orientation (e.g. year/season/month/date/day) should be attempted. Characteristically, scores on such tests will vary over time. Medical assessment should seek the causes, beginning with the commonest causes of delirium such as infection or dehydration. An electroencephalogram (EEG) is sometimes

used: typically there will be diffuse slowing and increased θ and δ-activity. This can help differentiate delirium from dementia but is rarely of significant prac- tical value. There may also be a need to assess for hearing or visual impairment. Table 26.5.1.1 Common causes of delirium Examples Predisposing factors (established risk factors from prospective studies) Older age Dementia Alcohol misuse Stroke Depression Hearing impairment Visual impairment Multimorbidity Functional impairment Urinary catheter Precipitating factors (selected) Polypharmacy Specific medications Infections Renal impairment Hypothermia Dehydration Trauma Infection Hypoxia Hypoglycaemia Alcohol and drug withdrawal Anticholinergics Sedatives Antiparkinsonism drugs Urinary tract infection Respiratory tract infection Delirium tremens Box 26.5.1.1 Diagnostic features of delirium • Reduced attention (i.e. reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment) • Acute onset of a change from the previous cognitive functioning • Fluctuation during the course of a day, and often worse at night • Other psychological disturbances (e.g. memory deficit, disorientation, language, visuospatial ability, or perception), hallucinations (often visual) • Evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal, or exposure to a toxin

26.5.1 Delirium 6477 Management Prevention The high prevalence and incidence of delirium in general hospital patients has led to considerable interest in its prevention. The onset of delirium is particularly common in orthopaedic postoperative patients and among unwell patients in intensive care units. Pharmacological methods with potential to prevent delirium in- clude antipsychotic agents, cholinesterase inhibitors, melatonin, or anti-inflammatory agents. To date, however, there is inadequate evi- dence to recommend this strategy. Prevention should instead focus on identifying higher risk patients and using complex interventions to reduce their risk of delirium (see Table 26.5.1.2). These measures are supported by evidence but require considerable multidisciplinary effort to implement. Some could be considered simply good clinical care (regular checks for dehydration, constipation, early mobilization, adequate pain relief). Others require a change in staff behaviour, for example use of orientation devices, regular checks on sensory aids like spectacles and hearing aids, pharmacist review for medications, with anticholinergic effects and allowing family to provide care outside visiting hours. Implementation of these meas- ures can only happen if there is a ward- or hospital-wide awareness of delirium and a willingness to actively identify, prevent, and treat the condition. Reducing the duration of delirium The treatment of delirium is an emergency. It is now clear that pro- longed delirium is associated with worse outcomes. Patients may come to harm from wandering or falls, and long periods of delirium may exacerbate dementia. The principles of management are there- fore to keep the patient from harm while seeking and treating the underlying cause. In a significant minority of cases no specific cause is found, and clinicians may be tempted to give antibiotics, especially if infective causes are suspected (e.g. when inflammatory markers are raised). There is at best equivocal evidence for the effect of antipsychotics and lorazepam in reducing the duration of delirium, and modest evidence from at least one controlled trial that rivastigmine (a cho- linesterase inhibitor) may lengthen duration of episodes. Routine use of psychotropic medication to reduce delirium is therefore not supported. Other proposed strategies, for example routine use of anti-inflammatory medication, are also unsupported by evidence. Treating the symptoms of delirium Given the lack of evidence that pharmacological treatment can re- duce the length of an episode, its role is limited to treating distressing symptoms. Chlordiazepoxide (or equivalent doses of diazepam, or other long-acting benzodiazepine) is recommended for the treatment of alcohol withdrawal and its major

complication of delirium tremens. For other causes, there is modest evidence to support the use of olanzapine, risperidone, and haloperidol in treating aggression, dis- tress, and psychotic symptoms in delirium. Local protocols usually suggest dosing regimens; as most patients are frail, lower doses are used than with younger patients with schizophrenia or mood dis- orders (the usual indications). These treatments should be withdrawn when symptoms re- solve, as there is doubt about the risk/benefit ratio after this time. Benzodiazepines (usually short acting agents like lorazepam) are sometimes used for behavioural control in distressed or aggressive patients, but there is little evidence to support this. Preventive and treatment interventions for delirium overlap con- siderably. They include direct support of brain function including reversing hypoxia and stopping deliriogenic drugs (see Box 26.5.1 and Table 26.5.2). Indirect support focuses on the environment of care: using orientation clocks, involving family in care, promoting sleep at night (e.g. using earplugs, side rooms), using single staff members during shifts. The environment of care includes staff and family carers, and responsible staff need to ensure that all carers clearly understand the diagnosis and prognosis. Outcome Delirium is a strong independent predictor of prolonged hospital stay, increased mortality, and of institutionalization. Delirium often indicates an as-yet undiagnosed dementia, while among patients with delirium who do not currently have dementia, the risk of de- mentia developing later is substantially increased. For those patients with established dementia, incident delirium is shown to accelerate the deteriorating course of dementia. For all of these outcomes, it ap- pears that length of delirium is predictive of poor outcomes, making shortening delirious episodes a legitimate management goal. It is now also clear that delirium is by no means always transient. Meta- analyses show that nearly half of hospital cases are not yet resolved at the point of discharge from hospital, while up to 20% remain deli- rious six months after the index episode. FURTHER READING American Psychiatric Association: (2013). Diagnostic and statistical manual of mental disorders, 5th edition. Arlington, VA. Cole MG (2010). Persistent delirium in older hospital inpatients. Curr Opin Psychiatry, 23, 250–4. Inouye SK, Westendorp RG, Saczynski JS (2014). Delirium in elderly people. Lancet, 383, 911–22. Maclullich AM, et al. (2013). New horizons in the pathogenesis, assess- ment and management of delirium. Age Ageing, 42, 667–74. Table 26.5.1.2 Preventive measures for delirium Routine Specific Avoid use of urinary catheters Use hearing aids and spectacles Detect and treat constipation Detect and treat pain Early mobilization Review nutritional and hydration status Stratification for delirium risk Secondary prevention—screening (e.g. using CAM) Orientation clocks Pharmacy review for drugs that cause delirium Sleep promotion Proactive management of alcohol and drug withdrawal

26.5.10 Eating disorders 6509 Christopher G. Fairb

26.5.10 Eating disorders 6509 Christopher G. Fairburn

26.5.10 Eating disorders 6509 development of PTSD. The natural course of PTSD is to reduce slowly over time; half of PTSD sufferers will no longer fulfil the full criteria two years after onset, but a third will continue to do so after six years. FURTHER READING Bisson JI (2014). Early responding to traumatic events. Br J Psychiatry, 204, 329–30. Bisson JI, et al. (2013). Psychological therapies for chronic post- traumatic stress disorder (PTSD) in adults (review). Cochrane Database Syst Rev, 12, CD003388. Hoskins M, et al. (2015). Pharmacotherapy for post-traumatic stress disorder: systematic review and meta-analysis. Br J Psychiatry, 206, 93–100. National Collaborating Centre for Mental Health (2005). Post- traumatic stress disorder: the management of PTSD in adults and children in primary and secondary care. Gaskell and BPS, London and Leicester. National Institute for Health and Care Excellence (NICE) (2013). Evidence update 49—post-traumatic stress disorder (PTSD). Manchester, NICE. https://arms.evidence.nhs.uk/resources/hub/1031525/attachment 26.5.10 Eating disorders Christopher G. Fairburn ESSENTIALS The eating disorders are a group of conditions, central to which is a disturbance of eating behaviour. The main diagnoses are an- orexia nervosa and bulimia nervosa, in both of which there is an extreme concern with weight and shape. In anorexia nervosa, per- sistent dietary restriction leads to weight loss, which may be severe. In bulimia nervosa, the dietary restriction is interrupted by re- peated episodes of binge eating (typically followed by self-induced vomiting) and weight is usually unremarkable. Both disorders may be accompanied by medical complications that present to physicians. Anorexia nervosa has the potential to be life-threatening because of the consequences of starvation. Patients may require medical at- tention for the correction of electrolyte disturbance and sometimes admission to a medical unit for refeeding. The main treatment of eating disorders is psychological. The prognosis of bulimia nervosa is generally good but is less positive for anorexia nervosa. Introduction The eating disorders are conditions in which a persistent disturb- ance of eating is the most prominent feature. There are two main eating disorders, anorexia nervosa and bulimia nervosa, and a third separate condition termed binge eating disorder. In addition, there is a residual category (termed here ‘other eating disorders’ or OEDs) reserved for eating disorders of clinical severity that do not meet the diagnostic criteria for anorexia nervosa, bulimia nervosa, or binge eating disorder. Box 26.5.10.1 lists their principal diagnostic criteria. Aetiology The aetiology of the eating disorders is

poorly understood. While many risk factors have been identified (Box 26.5.10.2), it is not clear how they operate and interact. The most prominent risk factors for anorexia nervosa and bulimia nervosa are being young and female, and living in a ‘Western’ culture in which slimness is prized and dieting is common. The personality traits of perfectionism and low self-esteem appear to increase the risk of both disorders, as does a family history of depression or an eating disorder. In common with many psychiatric disorders, adverse childhood experiences are also associated with an increase in risk. A family history of substance misuse or obesity specifically increases the risk of binge eating, as does an early menarche and a history of impulsivity. Family-genetic studies indicate an important genetic contribution and there appears to be cross-transmission between the eating dis- orders, suggesting shared familial liability. Molecular genetic studies have yielded inconsistent findings, probably in part because of small sample sizes and problems defining the phenotype. Box 26.5.10.1 Classification and diagnosis of the eating disorders Classification of eating disorders • Anorexia nervosa • Bulimia nervosa • Binge eating disorder • Other eating disorders (OEDs)1 Principal diagnostic criteria Anorexia nervosa 1. Overevaluation of shape and weight (i.e. judging self-worth largely, or exclusively, in terms of shape and weight) 2. Active maintenance of an unduly low body weight (e.g. body mass index <17.5) Bulimia nervosa 1. Overevaluation of shape and weight (i.e. judging self-worth largely, or exclusively, in terms of shape and weight) 2. Recurrent binge eating (e.g. episodes of uncontrolled overeating at least once a week) 3. Extreme weight-control behaviour (e.g. strict dietary restriction, fre- quent self-induced vomiting, or laxative misuse) 4. Diagnostic criteria for anorexia nervosa are not met Binge eating disorder Recurrent binge eating in the absence of the extreme weight-control behaviour seen in bulimia nervosa Other eating disorders Eating disorders of clinical severity that do not meet the diagnostic criteria for anorexia nervosa, bulimia nervosa, or binge eating disorder 1 The fifth edition of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders refers to these states as ‘Other specified feeding or eating disorder’.

 Once established, a variety of processes maintain an eating dis- order. These include persistent dieting, usually driven by the overevaluation of shape and weight; repeated checking of body shape, which tends to magnify concerns about appearance; and re- liance on aspects of the eating disorder (especially binge eating) to cope with adverse moods. Epidemiology In the general population among women aged 16–35 years, the point prevalence of bulimia nervosa is between 1 to 2% and that of the OEDs as high as 5%. Anorexia nervosa is much less common. In clinical settings, the diagnostic distribution differs according to age. Among adolescents, anorexia nervosa is the main presen- tation, whereas among adults the OEDs and bulimia nervosa are more common (Fig. 26.5.10.1). Nine out of ten adults with anor- exia nervosa, bulimia nervosa, or an OED are female and most are in their twenties. The demographic distribution of binge eating dis- order is different in that most patients are middle-aged and about a third are male. It is widely thought that eating disorders have become more prevalent over recent decades, but other explanations are plausible, including greater help-seeking, better detection, and changes in diagnostic practice. Clinical features Anorexia nervosa and bulimia nervosa, and most OEDs, share a distinctive ‘core psychopathology’, the overevaluation of shape and weight. Whereas most people evaluate themselves on their per- ceived performance in a variety of domains of life (the quality of their relationships; their work, and so on), people with eating dis- orders judge their self-worth largely, or even exclusively, in terms of their shape and weight and their ability to control them. This psy- chopathology is peculiar to the eating disorders and is rare in the general population. Most features of these disorders are

secondary to this psychopathology and its consequences. For example, it re- sults in a pursuit of weight loss and an intense fear of weight gain and fatness, and it leads many patients to scrutinize their bodies focusing on parts that they dislike. This may contribute to them overestimating their size. Anorexia nervosa In anorexia nervosa, the pursuit of weight loss leads patients to en- gage in a severe and selective restriction of food intake with foods viewed as fattening being avoided. There is no true ‘anorexia’ (in the sense of a loss of appetite). In the early stages undereating may be a goal in its own right, the patient valuing the sense of self- control that it imparts. Some also engage in a driven type of exer- cising which contributes to their weight loss. Self-induced vomiting and other extreme forms of weight control (such as the misuse of laxatives or diuretics) are practised by a subgroup. Depressive and anxiety symptoms, irritability, lability of mood, impaired concen- tration, loss of sexual appetite, and obsessional features are fre- quently present. Importantly these features get worse as weight is lost and improve with weight regain. Interest in the outside world also diminishes as patients become underweight with the result that most become socially withdrawn and isolated. The patient does not see their pursuit of weight loss as a problem and therefore has little desire to change. Bulimia nervosa The eating habits of people with bulimia nervosa resemble those seen in anorexia nervosa. The main distinguishing feature is that the attempts to restrict food intake are punctuated by repeated episodes Box 26.5.10.2 Principal risk factors for anorexia nervosa and bulimia nervosa General factors • Female • Adolescence and early adulthood • Living in a Western society Individual-specific factors Family history • Eating disorder of any type • Depression • Substance abuse, especially alcoholism (bulimia nervosa) • Obesity (bulimia nervosa) Premorbid experiences • Obstetric complications • Adverse parenting (especially low contact, high expectations, parental discord) • Sexual abuse • Family dieting • Critical comments about eating, shape, or weight from family or others • Occupational or recreational pressure to be slim Premorbid characteristics • Low self-esteem • Perfectionism (anorexia nervosa and to a lesser extent bulimia nervosa) • Neuroticism • Anxiety and anxiety disorders • Obesity (bulimia nervosa) • Early menarche (bulimia nervosa) • Type 1 diabetes (bulimia nervosa) BED AN BN OEDs Fig. 26.5.10.1 Typical distribution of the eating disorder diagnoses among specialist adult outpatients. AN, anorexia nervosa; BN, bulimia nervosa; BED, binge eating disorder; OEDs, other eating disorders.

 of binge eating. The frequency of these episodes ranges from once a week (the diagnostic threshold) to several times a day, and the amount eaten per episode is typically between 1000 and 2000 kcals. In most cases, compensatory self-induced vomiting or the taking of laxatives or diuretics follows binge eating, but there is a subgroup of patients who do not ‘purge’ in this way. The weight of most patients is unremarkable as the effects of the undereating and overeating cancel each other out. Depressive and anxiety symptoms are prominent ac- companiments and a subgroup is prone to substance misuse or self- injury or both. Other eating disorders The other eating disorders are very similar to anorexia nervosa and bulimia nervosa. There is the same overevaluation of shape and weight, and the same tendency to engage in persistent and extreme dieting and other forms of weight-control behaviour. Most of the OEDs are mixed states in which the features of anorexia nervosa and bulimia nervosa are combined in such a way that it is not possible to make either diagnosis. Body weight may be low if the dietary re- striction is marked. Many people with an OED have a history of anorexia nervosa or bulimia nervosa, or both, reflecting the diagnostic migration that is common among the eating disorders. The OEDs are as impairing as bulimia nervosa. Binge eating disorder Binge eating disorder differs from the three other eating disorder diagnoses. There is no tendency to engage in extreme weight-

control behaviour and generally no overevaluation of shape and weight. Instead, the binge eating occurs against a background of a general tendency to overeat, much as in many cases of obesity. Indeed, many people with binge eating disorder are overweight or have obesity. The course of binge eating disorder is generally phasic rather than persistent with extended periods, often lasting many months free from the disorder. Differential diagnosis There is a long differential diagnosis of medical conditions that can cause weight loss. The main psychiatric differential diagnosis is weight loss due to severe depression. However, the diagnosis of an eating disorder is best made on positive grounds using the his- tory and mental state examination to detect the characteristic be- havioural and attitudinal features, not by simply ruling out possible physical causes. Treatment Detection and diagnosis Many people with an eating disorder do not seek treatment. Those with anorexia nervosa may not be aware that they have a problem or they may attempt to hide it. Those with bulimia nervosa often keep their problem secret. When people do present for treatment they may do so only tentatively. Patients with anorexia nervosa typically attend for help at the insistence of concerned others. Those suffering from bulimia nervosa or an OED may attend of their own accord, although often with physical complaints associated with the dis- order such menstrual problems, infertility, or gastrointestinal dis- turbance. Under these circumstances, making the correct diagnosis can be difficult. The attitude and skill of the clinician during the initial appointments is important as patients are easily put off from re-attending. Place of treatment Most patients are treated as outpatients. A few may require admis- sion to a specialized eating disorders unit. Some may require admis- sion to a medical unit. Management of medical complications Physical symptoms, signs, and abnormal laboratory investiga- tions are often found in patients with anorexia nervosa (see Box 26.5.10.3). These are secondary to the disturbed eating habits and the compromised nutritional state (especially low body weight) and most are reversed by restoration of healthy eating habits and sound nutrition. Treatment should focus on the eating disorder it- self. It is, for example, inappropriate to treat starvation-induced hypothyroidism with thyroxine, and care is needed when correcting chronic electrolyte disturbance. Life-threatening complications must be addressed and the patient’s nutritional state optimized. Patients with a BMI less than 13 or who have lost weight at a rate of more than 1 kg per week are at risk of death. They may require intensive nutritional support as a medical inpatient, with monitoring of electrolytes and an elec- trocardiogram. In such cases, collaborative management with a psychiatrist skilled in the management of severe eating disorders is essential. Behaviour intended to prevent weight gain may be very challenging to manage on a medical ward and additional specialist nursing may be required. While oral refeeding is preferred, nasogastric tube feeding may be needed. Patients with a BMI of less than 13 are at risk of refeeding syndrome in which there is a potentially fatal shift in fluids and electrolytes in response to unduly rapid refeeding. The Mental Health Act can be used to treat life-endangering starvation as this is regarded as a manifestation of a mental illness. One other chronic medical problem deserves particular mention. This is the decrease in bone mineral density seen in longstanding anorexia nervosa, which is associated with a substantially increased fracture risk. Unlike the other medical complications, it may not be fully reversed by the restoration of a healthy weight, adequate diet, and the resumption of spontaneous menstruation. There is no proven treatment for it. Few physical abnormalities occur in bulimia nervosa unless purging is frequent, in which case there is risk of electrolyte disturb- ance. There are no medical complications of binge eating disorder other than those secondary to comorbid obesity. Management of the eating disorder The main treatments are psychological and are delivered on an out- patient basis. Various drugs influence the binge eating of patients with binge eating disorder, but they are not widely used given the effectiveness of psychological interventions.

SECTION 26 Psychiatric and drug-related disorders 6512 Drug treatment There are no pharmacological treatments for anorexia nervosa. In bulimia nervosa antidepressant medication may produce a decrease in the frequency of binge eating, but it is not clear if this benefit persists. Psychological treatment There is strong evidence supporting a specific form of cognitive behaviour therapy (CBT) for bulimia nervosa, which is endorsed by many national clinical guidelines. Recently this treatment has been superseded by an 'enhanced' version (CBT-E) that can be used to treat any form of eating disorder. It is a personalized treatment that addresses the specific processes maintaining the individual patient's eating disorder (Box 26.5.10.4). Among nonunderweight patients, two-thirds make a full response to CBT-E, whatever their eating disorder diagnosis. Treatment in those who are underweight (BMI <17.5) is more difficult and not always successful. Psychological treatment with CBT-E may need to be lengthy. The response rate has yet to be firmly established, but it appears to be approximately 40%. In adolescent patients, a specific form of family therapy is the favoured treatment with a response rate in the region of 50%. Binge eating disorder responds well to a variety of psychological inter- ventions including following a cognitive behavioural self-help pro- gramme with a limited amount of support. Prevention The research on prevention has mostly focused on programmes de- signed to reduce concerns about body shape. The group targeted has been adolescent girls and young women. While these programmes can reduce shape concerns, it has not yet been demonstrated that this has any effect on the likelihood of developing an eating disorder. Whether this is the right strategy is a moot point as body image concerns are only one among many risk factors for developing an eating disorder, and the magnitude and universality of its contribution is not clear. Outcome Established eating disorders tend to persist without treatment. Treatment-seeking is often delayed and presentations may be initially to medical services for physical complications of the disorders. • Electrolyte disturbance (varied in form; present in those who vomit frequently or misuse large quantities of laxatives or diuretics): vomiting—metabolic alkalosis and hypokalaemia; laxative misuse—metabolic acidosis, hypokalaemia Other abnormalities • Enlarged cerebral ventricles and deceased cortical substance • Osteopaenia and osteoporosis, especially of the spine (with height- ened fracture risk) Box 26.5.10.3 Principal medical complications of anorexia nervosa and bulimia nervosa Physical symptoms • Heightened sensitivity to the cold • Gastrointestinal symptoms—bloatedness, constipation, fullness after eating • Dizziness, palpitations, syncope • Amenorrhoea (in females not taking an oral contraceptive); low sexual appetite; infertility • Poor sleep with early morning wakening Physical signs • Emaciation • Stunted growth and failure of breast development (if prepubertal onset) • Dry skin; hair loss; fine downy hair (lanugo) on the back, forearms, and side of the face • Skin abrasions and callous formation on dorsal surface of the hand (in those who use their fingers to induce vomiting; Russell's sign) • Swelling of parotid and submandibular glands (especially in bulimia nervosa) • Erosion of inner surface of front teeth (perimylolysis) in those who vomit frequently • Cold hands and feet; acrocyanosis; hypothermia • Bradycardia; hypotension; cardiac arrhythmias (especially in those with electrolyte abnormalities) • Dependent oedema (complicating the evaluation of body weight) • Weak proximal muscles (elicited as difficulty rising from a squatting position) Abnormalities on investigation Endocrine • Low gonadotropin-releasing hormone (GnRH), luteinizing hor- mone (LH), follicle-stimulating hormone (FSH), oestrogen, and testosterone • Low T3, T4 in low normal range, normal thyroid-stimulating hormone, TSH ('low T3 syndrome') • Mild elevation of plasma cortisol • Elevated growth hormone with increased IGF-1 • Hypoglycaemia (uncommon) Cardiovascular • Electrocardiogram abnormalities (especially in those with electrolyte disturbance) • Reduced left ventricular mass Gastrointestinal • Delayed gastric emptying; delayed small bowel transit time •

Acute gastric dilatation (rare, secondary to binge eating or excessive refeeding) • Decreased colonic motility (secondary to chronic laxative misuse) Haematological • Moderate normocytic normochromic anaemia • Mild leucopoenia with relative lymphocytosis • Thrombocytopenia (uncommon) Other metabolic abnormalities • Hypercholesterolemia • Hypophosphatemia (exaggerated during refeeding) • Dehydration

26.5.11 Schizophrenia 6513 Stephen M. Lawrie

26.5.11 Schizophrenia 6513 Stephen M. Lawrie

26.5.11 Schizophrenia 6513 Anorexia nervosa The course of anorexia nervosa varies greatly. In the early months and years it may be self-limiting; it may require some form of inter- vention; it may evolve into bulimia nervosa, or another eating disorder; or it may persist and become treatment-resistant. It is par- ticularly important to be aware that anorexia nervosa can be life- threatening. It has a standardized mortality ratio of about six, most deaths being a direct result of medical complications related to star- vation, or suicide. Bulimia nervosa Once fully developed, bulimia nervosa tends to be self-perpetuating. It may persist for years or even decades with adverse effects on self- esteem, career, and relationships. It is common for sufferers to delay seeking help due to the shame associated with binge eating, and it is easy for them to keep the problem secret as their eating in public and appearance are both unremarkable. However, treatment—when sought—is usually effective FURTHER READING Fairburn CG (2008). Cognitive behavior therapy and eating disorders. Guilford Press, New York, NY. Lock J, le Grange D (2013). Treatment manual for anorexia nervosa: a family-based approach. Guilford Press, New York, NY. Mehler PS, Krantz MJ, Sachs KV (2015). Treatments of medical complications of anorexia nervosa and bulimia nervosa. J Eating Disord, 3, 15. National Institute for Health and Care Excellence (NICE) (2017). Eating disorders: recognition and treatment. NICE guideline [NG69]. https://www.nice.org.uk/guidance/ng69 Palmer RL (2014). Helping people with eating disorders, 2nd edition. John Wiley and Sons, Chichester. Royal College of Psychiatrists (2014). Report CR189. MARSIPAN: man- agement of really sick patients with anorexia nervosa, 2nd edition. https:// www.rcpsych.ac.uk/usefulresources/publications/collegereports/cr/ cr189.aspx 26.5.11 Schizophrenia Stephen M. Lawrie ESSENTIALS Schizophrenia is typically a severe chronic mental illness with a high morbidity and increased mortality. It has a complex aetiology including a substantial genetic component. Its clinical features include characteristic delusions and hallucinations. There are no diagnostic tests. The differential diagnosis is from manic states, organic brain dis- orders, and substance misuse. Whilst the management is complex, antipsychotic drugs are effective in reducing symptoms. The overall prognosis is poor; many patients live restricted lives and there is a high rate of suicide. However, some patients return to normal functioning. Importantly for physicians, people with schizophrenia die on average 10 years earlier than the general population, mainly because of car- diac and cerebrovascular disease, which is

often inadequately treated. Introduction A psychotic disorder is a mental illness characterized by hallucin- ations and/or delusions. Schizophrenia is a psychosis in which the hallucinations are typically auditory and the delusions often of a bi- zarre nature. The literal translation of schizophrenia from the Greek is ‘split mind’. This refers to a splitting of mental functions, and has nothing to do with a so-called split personality. Box 26.5.10.4 Principal characteristics of enhanced cognitive behaviour therapy (CBT-E) Aims i. To normalize eating habits and, if applicable, restore body weight ii. To correct the mechanisms that have been maintaining the eating disorder iii. To protect against relapse Format One-to-one treatment (although significant others may attend certain sessions if indicated). Number of sessions: • Nonunderweight patients—about 20 hour-long sessions over 20 weeks. Initial sessions twice-weekly. • Underweight patients—Extended to about 40 hour-long sessions over 40 weeks. Initial sessions twice-weekly. Content Personalized to match the processes maintaining the patient’s eating disorder Two versions: • The focused version is the default version and is suitable for most pa- tients. It focuses exclusively on the eating disorder features. • The broad version is designed for a subgroup of patients in whom certain characteristic problems outside the eating disorder are maintaining the condition, namely extreme perfectionism, marked low self-esteem or major interpersonal difficulties. Four stages: • In stage 1, the focus is on gaining an understanding of the eating problem and helping patients modify and stabilize their pattern of eating. There is also emphasis on personalized education and the ad- dressing of concerns about weight. The sessions are twice-weekly. • In stage 2, progress is systematically reviewed and plans are made for the main body of treatment • Stage 3 consists of a run of weekly sessions focused on the processes that are maintaining the patient’s eating problem. Usually this involves addressing concerns about shape and eating; enhancing the ability to deal with day-to-day events and moods; and reducing dietary restraint. • Towards the end of stage 3 and in stage 4, the emphasis shifts onto the future. The focus is on how to deal with setbacks and maintain improvement.

SECTION 26 Psychiatric and drug-related disorders 6514 Aetiology Genetic factors Schizophrenia runs in families, but the monozygotic concordance rate is only 50% (i.e. the environment clearly plays a significant role). Most cases are likely to be multifactorial and polygenic. The Psychiatric Genomics Consortium recently pooled data from more than 36 000 cases and 100 000 controls and found 108 separate gen- etic loci associated with an increased risk, accounting for about 7% of the variance in liability. Each gene, however, only increases the risk by 5% or less (Table 26.5.11.1). Some of the genes implicated include those concerned with the major histocompatibility complex, calcium signalling, glutamatergic, and dopaminergic neurotrans- mission. There are however some rare genetic variants with larger effects: a 22q11.2 micro-deletion sometimes called DiGeorge syn- drome or velo-cardio facial syndrome increases the risk of schizo- phrenia and other severe mental illnesses about 30 times. Recent advances in genetic technology have allowed the identification of other copy number variations which are deletions or additional copies of genes. These are present in 2–3% of people with schizo- phrenia, and in people with autism and intellectual disability. Environmental factors There is an excess of winter births. This may convey risk by infection or poor nutrition. Neurodevelopmental disruptions such as obstetric complications and minor physical anomalies, motor, cognitive, and social difficulties, all increase the risk of subsequent schizophrenia. Urban birth and upbringing, and adversity in childhood, also in- crease the risk. Chronic, regular use of cannabis and stimulants are among the most potent risk factors for precipitating schizophrenia, but the strongest known environmental risk factor is immigration, possibly related to the perceived threat or lack of support in an alien environment. Stressful life

events may precipitate psychosis in those who are predisposed. Stress, including negative ‘expressed emotion’ (criticism, hostility) from relatives, can also cause relapses. Pathophysiology All effective antipsychotic drugs block dopamine (D2) receptors, and the potency with which they do that correlates with the dose required in clinical practice. This provides indirect evidence for the so-called ‘dopamine hypothesis of schizophrenia’ which posits that acute, positive symptoms are caused by increased dopamine turn- over. This hypothesis is supported by strong evidence that dopa- minergic agonists—ephedrine, cocaine, and amphetamine—can cause psychosis. Direct evidence also comes from an impressively consistent literature showing increased radiolabelled dopamine precursor turnover in presynaptic neurons in the striatum. Acute administration of dopamine agonists increases dopamine turnover and positive psychotic symptoms. Cannabis and social stress may also increase the risk of schizophrenia via release of dopamine. There is, however, as much evidence for disruption in glutamate neurotransmission in schizophrenia. A glutamate theory also offers a better account of the cognitive disruption typically seen in schizo- phrenia, including an average 10-point drop in IQ from premorbid levels. It remains unclear just how these neurochemical disruptions re- sult in the mental changes observed, such as delusions and hallu- cinations. The hypotheses include disrupted dopamine signalling making irrelevant stimuli abnormally salient, causing persecutory delusions, and dysconnection in corollary discharges between lan- guage regions of the cortex, causing auditory hallucinations. Epidemiology Schizophrenia has a modal age at onset of 25 years. It is usually asso- ciated with long-term disability. The prevalence is remarkably con- sistent worldwide at approximately 0.5%. This translates to about 300 000 cases in the United Kingdom. Clinical features The diagnostic criteria in DSM-5 are summarized in Table 26.5.11.2. The ICD-10 diagnostic criteria differ in that they continue to stress the particular importance of Schneider’s’ ‘First Rank Symptoms’ (FRSs) in making the diagnosis. FRSs include certain types of audi- tory hallucinations such as hearing one’s own thoughts spoken aloud (‘echo de la pensee’), hearing voices that comment on what one is doing or thinking (in the second person) or arguing about or dis- cussing one in the third person. FRS also include specific delusions; these include the conviction that thoughts from outside are being inserted into one’s head (‘thought insertion’), that thoughts are being withdrawn from one’s head (‘thought withdrawal’) and that one’s thoughts are broadcast to others (‘thought broadcast’), ‘delusions of passivity’ and feelings or volitions or bodily functions which are ex- perienced as imposed by an outside force or agency. The symptoms of schizophrenia may be divided into: • Positive symptoms: these are pathological by their presence; for example, hallucinations, delusions, disorganized speech (aka ‘thought disorder’, such as ‘loosening of associations’ between ideas), and incongruity of affect (inappropriate laughter or tears). Table 26.5.11.1 The main risk factors for schizophrenia Family history c.50 × increased risk in monozygotic twin of person with schizophrenia 10 × increase in other first degree relatives Immigrant status c.5 × increased risk Childhood adversity c.3 × increased risk Cannabis use (regular) c.3 × increased risk
Table 26.5.11.2 Summary of DSM-5 diagnostic criteria for schizophrenia A–E are all required: A. Two or more of: delusions, hallucinations, disorganized speech, grossly disorganized behaviour, negative symptoms, for one month (less if treated) B. Impaired social or occupational functioning C. Illness continuous over at least six months (including acute phase) D. Any mood disorder is only brief or minor E. Not due to drugs of abuse, medication, or medical illness

 These tend to dominate the clinical picture in the acute phase and respond to antipsychotic medication. • Negative symptoms: these are pathological by their absence; for example, lack of affect, lack of motivation (avolition), poverty of speech (alogia), and

social withdrawal. Negative symptoms do not tend to respond to current treatments, are a poor prognostic sign and tend to dominate the clinical picture in chronic cases. Differential diagnosis To make a diagnosis of schizophrenia it is necessary to identify the key features. This may take time and usually requires a collateral history. The main psychiatric differential diagnosis is from the manic phase of bipolar disorder. In manic states the delusions are usually is in keeping with mood (‘mood congruent’) and the mood disturb- ance dominates the clinical picture. The main medical differential diagnosis is from alcohol or illicit drug misuse, and less commonly from organic psychoses resulting from infections condition such as neurosyphilis, temporal lobe epi- lepsy, and head injury. Impaired conscious level and fluctuating con- fusion suggest an organic syndrome. Drug screening, appropriate investigation, and brain scanning should be considered in all new cases of acute psychosis. Clinical investigations Despite notable scientific progress in understanding the genetic aetiology and pathophysiological mechanisms, there is no object- ively measurable diagnostic abnormality; schizophrenia remains diagnosed as a syndrome based on the clinical picture. However, it has been known for years that patients with schizophrenia have large lateral ventricles and reduced brain volumes, especially in frontotemporal regions. Brain imaging technologies and studies have advanced to the point that structural MRI in particular has been found in research settings to provide an early diagnoses with 80–90% overall accuracy, but such methods are not yet ready for routine clinical use. Treatment Principles of management Treatment with antipsychotic drugs is the mainstay of the treat- ment of schizophrenia. They reduce behavioural disturbance within minutes or hours, reduce acute symptoms in days, and reduce the risk of relapse over months and years. The number needed to treat (NNT) for response in each of these situations is approximately three. Consequently antipsychotic drug treatment for schizophrenia is among the most effective interventions in medicine. Antipsychotic drugs also have limitations, however. They are more effective against positive than negative symptoms. They also have unpleasant adverse effects. Some adverse effects such as sedation can be useful in acute psychosis, but weight gain can be major problem in chronic cases. The other major adverse ef- fect is a range of extrapyramidal side effects. Acute dystonia such as oculogyric crises, trismus, and torticollis can occur within minutes or hours and may require parenteral procyclidene or benztropine. Akathisia and parkinsonism may emerge after days or weeks; while they respond to propranolol or anticholinergics, respectively, they are better avoided by prescribing low doses of antipsychotics in the first place. Tardive dyskinesia can emerge after years of treatment, but is becoming less common. This may reflect the increasing use of so-called ‘second generation’ or ‘atyp- ical’ antipsychotic drugs, which cause few extrapyramidal side ef- fects but more weight gain than ‘first generation’ drugs such as chlorpromazine and haloperidol. As efficacy and adverse effects vary from drug to drug (Table 26.5.11.3), fine-tuning of medication type and dose is needed to optimize effectiveness, promote compliance, and reduce adverse effects. Behavioural, psychological, and social interventions are also ef- fective for patients with schizophrenia and are popular with patients and carers, but are inconsistently implemented. Support and illness education can help patients and carers cope with what is usually a chronic illness, and ‘family intervention’ may help to reduce relatives ‘expressed emotion’. Cognitive behavioural treatment (CBT) seems likely to be useful in most phases of the illness, usually in addition to antipsychotic medication, but the evidence base for this remains controversial. Typically, only 10% of people with schizophrenia will sustain long-term competitive employment, but 50% or so can manage with vocational rehabilitation and ‘job coaches’. Both the so-called ‘re- covery movement’, which stresses that patients can lead satisfying Table 26.5.11.3 Commonly used antipsychotic drugs Type/name of drug Optimal dosea Main side effects Phenothiazines Chlorpromazine Thioridazine

Trifluoperazine 400–600 mg/day 400–600 mg/day 5–10 mg/day Sedation Anticholinergic Extrapyramidal Butyrophenones Haloperidol 8–12 mg/day Extrapyramidal Benzamides Sulpiride Pimozide 800–1200 mg/day 8–10 mg/day Minimal Minimal Depot injections Flupentixol decanoate Fluphenazine decanoate Haloperidol decanoate 40 mg every 2 weeks 25 mg every 2 weeks 100 mg monthly Extrapyramidal Extrapyramidal Extrapyramidal Second-generation drugs Risperidone Olanzapine Quetiapine Amisulpiride 4–6 mg/day 10–15 mg/day 300–600 mg/day 800–1200 mg/day Extrapyramidal Weight gain Sedation Agitation Atypical antipsychotic drugs Clozapine 300–600 mg/day Hypersalivation a This dose of chlorpromazine is established from meta-analyses. Others are calculated as chlorpromazine equivalents. These are less certain for depot, second-generation, and atypical drugs.

SECTION 26 Psychiatric and drug-related disorders 6516 and productive lives, and ‘early psychosis services’, offering holistic care packages for those at risk of or in their first episode of psych- osis, have improved the overall outlook for patients with acute and chronic schizophrenia. The stigmatization of patients with schizophrenia, and those who look after them, remains common. The issue of violent behaviour in particular is frequently misrepresented in the media. While there is a slightly increased risk of violence in acute, unmedicated schizo- phrenia, patients are much more likely to be assaulted that to assault others. Mentally ill people commit less than 10% of all homicides; the public are much more likely to be assaulted by family or friends than by strangers with schizophrenia. Acute treatment Patients in an acute episode, especially if it is their first episode or is associated with illicit drug use, may lack insight into their condition. They may then require compulsory treatment using the law. In the United Kingdom, this is usually under the Mental Health Act. Acute behavioural disturbance, such as agitation or aggression may be treated with a combination of haloperidol (5 mg) and lor- azepam (2 mg). The subsequent regular drug treatment should usu- ally be with a low-potency first generation antipsychotic drug such as chlorpromazine (at a dose of 400–600 mg daily), or a second- generation antipsychotic drug such as risperidone (4–6 mg daily) or olanzapine (10–15 mg daily). Most patients will respond to one or other of these. With the reduction in the numbers of psychiatric beds, there is an emphasis on treatment outside of hospital. Community services, ‘crisis teams’ and ‘intensive home treatment teams’ are often, but not always, able to manage patients in their homes with frequent visits for monitoring and support. Maintenance treatment Numerous randomized trials have found that maintenance use of antipsychotic medication reduces relapse rates at over one year com- pared to placebo (drugs 27% vs. placebo 64%; number needed to treat 3). A smaller dose of antipsychotic drug is often sufficient for maintenance and may enhance compliance. Esterified preparations of antipsychotic drugs allow them to be given as slow releasing fat-soluble depot injections every two to four weeks for patients who want that (rather than taking pills every day), or for those who need to be treated against their will. Approximately one-third of patients will not adequately respond to first- or second-line treatments. They should be offered the only truly ‘atypical antipsychotic drug’, clozapine (300–600 mg daily). This works in most patients with such ‘treatment-resistant schizo- phrenia’, but requires regular blood monitoring to reduce the risk of agranulocytosis. Various psychological and social interventions including cogni- tive behavioural treatment, illness education, and family interven- tion can reduce the relapse rate. Members of the multidisciplinary community mental health teams can provide these and other services. For example, community psychiatric nurses can monitor and support patients, give depot injections, and help patients access other services. Social workers can help with benefits and inde- pendent or supported accommodation. Outcome Some people with schizophrenia have manifest difficulties in their

development, but most have had an unremarkable childhood. The first symptoms are usually a prodromal ‘loss of (mental) con- trol’, anxiety, or depression over months or years before the ad- vent of delusions and hallucinations in early adulthood. Major behavioural changes can accompany the development of delu- sions and hallucinations. Relapses and remissions with some re- sidual disability are typical, and complete lasting recovery is rare. Good treatment response is predicted by a good initial response to medication, but most patients will have a relapsing and remitting illness course, with some ongoing negative symptoms, intermittent positive symptoms, social and occupational impairments between episodes. Predictors of outcome Acute onset and good premorbid functioning predict a better prog- nosis. Living in a developing country may be associated with a better overall outcome, possibly because of greater social support. Five to ten per cent (5–10%) of patients with schizophrenia will commit suicide. Medical morbidity Most people with schizophrenia die of heart attacks, cancer, and strokes, and they do so approximately 10–15 years earlier than population average. This shortened life expectancy is attribut- able to both behaviour and circumstance; most patients smoke heavily and many drink to excess. These effects are compounded by poverty and poor diet and inactivity. There is a major med- ical challenge in correcting the current underinvestigation and undertreatment of these serious medical conditions in people with schizophrenia. FURTHER READING Howes OD, Murray RM (2014). Schizophrenia: an integrated socio- developmental-cognitive model. Lancet, 383, 1677–87. Leucht S, et al. (2012). Antipsychotic drugs versus placebo for relapse prevention in schizophrenia: a systematic review and meta-analysis. Lancet, 379, 2063–71. Schizophrenia Working Group of the Psychiatric Genomics Consortium (2014). Biological insights from 108 schizophrenia- associated genetic loci. Nature, 511, 421–7. Turner DT, et al. (2014). Psychological interventions for psychosis: a meta-analysis of comparative outcome studies. Am J Psychiatry, 171, 523–38. Zarogianni E, Moorhead TW, Lawrie SM (2013). Towards the identi- fication of imaging biomarkers in schizophrenia, using multivariate pattern classification at a single-subject level. Neuroimage Clin, 3, 279–89.

26.5.12 Somatic symptom and related disorders 6517

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Michael Sharpe

26.5.12 Somatic symptom and related disorders 6517 26.5.12 Somatic symptom and related disorders Michael Sharpe ESSENTIALS Somatic symptom disorder is a diagnosis for patients who have marked concern about physical symptoms that appears to be dis- proportionate to the severity of any associated disease. In conver- sion disorder the patient’s symptom is loss of a function, such as movement of a limb. This does not mean that the symptoms are not real. Somatic symptom disorder incorporates the older diagnoses of somatoform disorder, somatization disorder, Briquet’s syndrome, and hypochondriasis. Somatic symptom disorder of mild severity is common in medical clinics; it usually responds to simple explanation and reassurance. More severe somatic symptom disorder with multiple symptoms and severe disability is less common, but important to diagnose because these patients are at substantial risk of iatrogenic harm from excessive investigation and speculative medical or surgical treatment. Severe somatic symptom disorder usually requires multidisciplinary care, including liaison psychiatry. Introduction There are several psychiatric diagnoses specifically applicable to patients who present with concern about symptoms that is dis- proportionate to the severity of any physical disease. This dif- ferential diagnosis is considered in the chapter on medically unexplained symptoms. While the most commonly associated psychiatric diagnoses are depressive and anxiety disorders, this chapter focuses on patients whose presentations are not ad- equately explained by either physical disease or by depressive or anxiety disorders. Somatic symptom disorder (SSD) is a new term which in- cludes syndromes previously referred to as somatoform dis- orders, somatization disorder (or Briquet’s syndrome) and hypochondriasis. The core feature of these disorders is that the patient’s reaction to their physical symptoms is the focus of clin- ical concern. Common physical symptoms of somatic symptom disorders are pain and fatigue, although almost any symptom may be the focus of attention. The symptoms may cluster to- gether in apparent association with a particular bodily system such as musculoskeletal pain, bowel-related symptoms, or chest pain. In more severe cases, symptoms are typically diverse and relate to multiple bodily systems. Simply having

physical symptoms does not merit a diagnosis of SSD, even if these symptoms are unexplained by physical disease. A diagnosis of SSD requires that additional features are present. These include excessive concern or preoccupation with the symp- toms, associated emotional distress, and maladaptive behaviour in relation to the symptoms such as the repeated and unnecessary seeking of medical attention. Patients with severe SSD are commonly very disabled, receive large amounts of unproductive medical atten- tion, and suffer iatrogenic harm. A related disorder is called conversion disorder (or functional neurological symptom disorder). This is similar to SSD, but in this disorder the patient's complaints include apparent loss of or change in a function, such as movement of a limb or impairment of vision. It also includes attacks that look like epileptic seizures but are not (so-called nonepileptic attacks), gait disorders, and other abnormal movements. Aetiology The aetiology of SSD is multifactorial. Predisposing factors for se- vere SSD include a family history, childhood neglect and abuse, and childhood experience of illness in the family. Symptoms may be associated with depression and anxiety. An ongoing interaction with medical services is probably a maintaining factor, with the patient increasingly developing the conviction that they are sick, even in the absence of medical evidence for this belief. The patient's life may become focused on care-seeking and disability, behaviour that may be reinforced by family members, partners, and others. Particularly important is the behaviour of doctors who may ex- acerbate the disorder. Ways in which this may happen are listed in Box 26.5.12.1. These iatrogenic factors are particularly important to consider, as even if we cannot always successfully treat a patient with severe SSD, we can at least avoid making the problem worse. Epidemiology Physical symptoms are extremely common in the general popu- lation, but only a few people experiencing them will seek medical attention, usually because of concern about the cause or because of severe discomfort or disability. The prevalence of SSD will vary by setting, but is more common in specialist clinics where it may account for 10–20% of consultations. Severe SSD, previously termed somatization disorder or Briquet's syndrome, in which there is a lifelong history of multiple symptoms and usually severe associated disability, is present in about 5% of medical patients. While only a small number of patients with SSD become inpatients, when this Box 26.5.12.1 Potential psychological iatrogenesis in somatic symptom disorder • Inadvertently exacerbating the patient's concern (e.g. by mentioning rare diseases or ordering unnecessary tests) • Dismissing the patient's complaints, which may lead them to reject the reassurance given • Giving inappropriate advice such as recommending excessive resting or unnecessary splints and supports, which may only serve to increase attention on the complaint and cause unwanted effects such as muscle weakness • Providing inappropriate disease focused pharmacological and sur- gical interventions, which may only generate further symptoms (e.g. abdominal surgery causing adhesions and opiate prescribing causing addiction)

 occurs it carries a high risk of iatrogenic harm, for example, from unnecessary surgery. Clinical features The main features of SSD are physical symptoms and the patient's concern about these. There may be no identifiable disease. If there is disease, the patient's concerns are markedly disproportionate, usu- ally focusing on the symptoms themselves and their distressing or disabling quality, although sometimes their main worry is about the possibility of undiagnosed serious disease that persists despite med- ical evidence to the contrary. Such patients may repeatedly seek re- assurance from doctors. SSD may be mild, moderate, or severe. In mild cases, there may only be one or two symptoms, such as pain and fatigue. In moderate cases, there may be multiple symptoms associated with distress and disability, and often frequent and unproductive inter- actions with doctors. Patients with severe

cases may have lifelong multiple symptoms and severe disability, for example, being wheelchair bound. For patients with severe SSD, pointers to the diagnosis may be apparent even before the consultation. The GP referral letter and medical records may note frequent attendance at medical services with a long history of numerous negative (and often repeated) investigations. There may also be a history of failed treatment with a record of multiple symptom-relieving medica- tions and even surgery. Differential diagnosis The differential diagnosis is from other medical and psychiatric conditions. Medical conditions The main medical differential is from symptoms that are entirely at- tributable to disease. It should be noted, however, that the identifi- cation of disease does not necessarily exclude SSD. For example, a high proportion of patients with nonepileptic attacks (attacks that look like epilepsy but are not associated with seizure activity in the brain) also have electroencephalogram (EEG) diagnosable epilepsy. The coexistence of SSD and a diagnosis of potentially fatal disease, for example, when the patient has both noncardiac chest pain and severe coronary artery disease, greatly increase the complexity of management. Other psychiatric disorders Other psychiatric disorders are associated with severe concern about physical symptoms. Anxiety disorders, especially panic disorder, can cause physical symptoms (breathlessness, paraesthesia, chest pain, and dizziness). Depressive disorder can also be the cause of troublesome physical symptoms, such as lethargy, sleep disturbance, pain, and weight loss. These symptoms may lead both the patient and their physician to erroneously conclude that they have a medical condition. It is important to diagnose anxiety and depression as they are relatively easily treated. Occasionally, concern about somatic symptoms may be delu- sional and part of a psychotic illness, for example, a patient who is unshakably convinced that a burning sensation in his head is due to tearing of his brain. Factitious disorder and malingering Patients with SSD suffer and should be differentiated from patients who construct medical presentations in order to deceive doctors. While such deliberate faking of symptoms and signs certainly oc- curs, it is unusual in routine clinical practice. Clues to its presence are observations or reports of markedly inconsistent behaviour (e.g. a patient who attends in a wheelchair but who is later seen walking briskly to their car or playing tennis). In such cases, if the patient’s apparent aim is the seeking of medical care and attention, the diag- nosis is that of factitious disorder, severe cases of which have been referred to as ‘Munchausen’s syndrome’. If the apparent aim is to seek other forms of benefit such as financial compensation or exemption from a duty or prosecution, the behaviour does not merit a psy- chiatric diagnosis: it is a form of dishonest behaviour, often called malingering. Clinical assessment The history and medical records are often critical to the diagnosis by documenting a history of consulting and negative investiga- tions. While the patient must be assessed for physical disease in the usual way, care should be taken about unnecessarily repeating or duplicating investigations. It is uncommon to miss serious physical disease if a careful clinical assessment is made. History The history should include not only questions about symptoms, but also questions about the patient’s fears and beliefs about the symp- toms, their emotional reaction to them, and how they cope. The his- tory of previous illness may reveal long-standing similar symptoms that have been extensively investigated. A full list of medications the patient takes is important; it may be a long and illogical one. Physical examination It is important to physically examine the patient. This may not only reveal unsuspected clinical signs suggesting disease, but also helps to reassure the patient that their complaints have been taken ser- iously and properly assessed. It may also reveal scars from many previous operations. In conversions disorder, positive findings on neurological examination help in making the diagnosis, for ex- ample, Hoover’s sign (demonstration of synergistic contraction, e.g. if a patient is asked to raise their right leg off the bed, they will naturally tense the extensors of their left leg as they do so; if they don’t, then they are not making

a genuine effort, and Hoover’s sign is positive). Observations during the consultation The patient with severe SSD may be disproportionately disabled, even being pushed in a wheelchair or using braces. The patient may moan or rub the affected bodily parts, as if to emphasize their

26.5.12 Somatic symptom and related disorders 6519 suffering. The patient’s partner may be seen to behave in a solicitous way in keeping with the disproportionate disability. Investigations
A balance must be struck between the risk of missing disease and the iatrogenic psychological harm that can result from overinvestigation. It is good practice to check if any investigation has been performed recently before ordering it again. Review of medical records It is especially important to obtain and review all the medical re- cords. These may indicate many previous assessments and investiga- tions, as well as failed treatments. They may also document a pattern of referral to many different specialists. Management The general principles of management are outlined in Box 26.5.12.2. Acknowledging, reassuring, and explaining The starting point of effective management is to make it clear to the patient that you accept the reality of their suffering and do not think they are imagining their symptoms. The patient then needs reassuring that there is no evidence they have an unpleasant disease, followed by a positive diagnosis and a credible explanation for their symptoms and practical plan. Providing reassurance The provision of appropriate reassurance is an important part of the medical consultation. To be effective it must be based on the patient’s specific concerns, not those of the doctor, hence it is important to ask the patient what they are worried they have before reassuring them that they do not have it. Many patients report the physical examination as particularly re- assuring. A detailed explanation of what any investigations show can also help, including showing the patient any relevant images. While it is unwise to state categorically to any patient that they have no disease, it can help to explain that the probability they have the disease that they fear is very low, and why. Beware, however, of the patient who repeatedly asks for reassurance about the same dis- ease; they may have health anxiety disorder, a condition that is per- petuated by repeated reassurance-seeking. Giving a diagnosis and explanation Patients benefit from a positive diagnosis, and the failure to offer one may set them off on an unhelpful search. However, the diag- nosis given must be appropriate. The term ‘functional symptoms’ (symptoms that reflect a reversible change in bodily function rather than fixed ‘structural disease’) may be useful here. This diagnosis can then be elaborated with an explanation of what may have caused the symptoms. While our understanding of the aetiology of SSD is imperfect, we do have some evidence as described in the previous section on aetiology. Explanations that include both psychological and biological factors and emphasize which of these factors are po- tentially reversible set the scene for treatment (see next). It is worth noting that overly simplistic explanations for symp- toms are probably unhelpful. On the one hand saying that the symp- toms are ‘just psychological’ or ‘all in the mind’ is likely to offend the patient and to reduce their confidence in you and your suggested management plan. On the other hand, colluding with beliefs that their symptoms indicate an untreatable disease (such as chronic Lyme disease) when they do not is also likely to make the patient unwilling to accept appropriate treatment and to promote unneces- sary invalidity. Giving practical advice After the diagnosis and explanation, a positive plan of action that specifies both what the patient can change and what the doctor will do is required. The patient can be advised how to change any potential illness- perpetuating behaviours (e.g. by becoming more active and not searching for illnesses on the internet). The doctor can offer to provide accurate information about the illness, review their pro- gress and if appropriate prescribe (e.g. an antidepressant drug) and refer (e.g. to physiotherapy or specialist psychology). Writing specifically to the patient, as well as to the general practitioner to summarize

the conclusions of the medical assessment and the pro- posed plan of action usefully reinforces these messages, which may otherwise be forgotten, and gives the patient something to show family members. Antidepressant drug treatment The so-called antidepressant drugs have been found to be of some benefit in SSD. While they are most likely to be helpful when the patient is depressed or anxious, they can also reduce symptoms such as pain in patients who are not depressed or anxious. However, an observed high drop-out rate from treatment emphasizes the need for careful explanation and follow-up to ensure adherence. For these drugs to be accepted by the patient, a clear explanation of why they are being prescribed is required. One of the following two ap- proaches is suggested: the first is to explain that the term ‘antidepres- sant’ is a misnomer and that the drugs are actually broad-spectrum agents of proven value for symptoms such as difficulty sleeping and pain, as well as for depression. The second is to be explicit that they are being prescribed for depression or anxiety, but to emphasize that these psychological problems are an entirely understandable reac- tion to the distressing somatic symptoms. Box 26.5.12.2 Management principles for somatic symptom disorder • Exclude disease, but avoid unnecessary investigation or medical referral • Tell the patient that you accept and sympathize with their complaint(s) • Give the patient a positive diagnosis and explanation • Encourage a return to normal functioning • Consider prescribing antidepressant drugs with appropriate explanation • Consider referral to specialist liaison psychiatry or psychology

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SECTION 26 Psychiatric and drug-related disorders 6520 Psychological treatment The most widely used psychological treatments for SSD are behav- ioural or cognitive behavioural therapy (CBT). These therapies aim to help the patient change the thinking (cognitions) and ways of coping (behaviour) that are perpetuating their symptoms and asso- ciated concerns. Systematic reviews of CBT have found it be to mod- erately effective in SSD, but the psychological treatment of severe cases of SSD requires considerable expertise. Referral Reasons to refer patients with possible SSD include diagnostic un- certainty and the need for specialist management. Liaison psychiat- rists can be helpful both in reaching a positive diagnosis of SSD and in addressing the psychiatric differential diagnosis. Specialist med- ical services may be available for the treatment of particular symp- toms, for example, for chronic pain or chronic fatigue syndrome. Specialist psychology services may be able to offer cognitive behav- ioural therapy for SSD. How to refer When explaining the referral to the patient, it is wise to be positive about the service you are referring to. If you are referring them to a psychiatry or psychology service it is important to emphasize that the referral does not mean you regard the patient's symptoms as 'not real' or 'all in the mind'. A patient is more likely to attend the service to which you have referred if you say: 'I see you have real and troublesome symptoms. I am pleased to tell you that I can't find any evidence of serious disease but I am sorry to say that I do not have a simple cure that I can prescribe. However, I can recommend and refer you to a specialist service for your problem', than if you tell them: 'There is clearly nothing wrong with you; it must all be in your mind. There is nothing to do now but to refer you to the shrinks.' Management of severe SSD Patients with complex and severe SSD pose particular management challenges. They may seek care from multiple doctors and be per- plexing and challenging to manage, especially if they also have a serious medical condition. The help of a liaison psychiatrist should be sought early and a management plan agreed with all concerned, including the patient's primary care physician if possible. This is often best achieved by holding a case conference. The agreed plan should limit referrals and investigations and include proactive regular re- view of the patient, if possible by a single physician. Although time-consuming in the short term, this approach can both reduce iatrogenic harm and save time and resources in the longer term. Prognosis The prognosis of SSD will depend both on the nature of the patient's presentation and how it is managed. Untreated, the prognosis for pa- tients with SSD severe

enough to be referred to secondary care is not good, particularly if the disorder is not well managed. The prognosis is best for those patients who were well before the onset of symptoms and who have clear depressive and anxiety symptoms. It is worst for those patients with very long-standing multiple symptoms. Areas of uncertainty and controversy Many aspects of the nature and management of SSD are controver- sial. The core issue is whether it is best regarded as a psychiatric/ psychological problem or as a medical condition, with the risk that the patient may end up abandoned in a medical 'no man's land'. This problem has been played out particularly prominently in the de- bate over the chronic fatigue syndrome/myalgic encephalomyelitis.
A consideration of the changing medical fashions for the explan- ation of such symptoms over the last few hundred years should en- courage humility and suggests that current controversies may tell us more about the inadequacies of our conceptualization of illness and our health services than they do about our patients. FURTHER READING American Psychiatric Association (2013). Somatic symptom and re- lated disorders. In: Diagnostic and stastical manual of mental dis- orders, 5th edition (DSM-5). American Psychiatric Association, Arlington, VA. Dimsdale JE, et al. (2013). Somatic symptom disorder: an important change in DSM. J Psychosom Res, 75, 223–8. Kroenke K (2014). A practical and evidence-based approach to common symptoms: a narrative review. Ann Int Med, 161, 579–86. Sharpe M (2013). Somatic symptoms: beyond 'medically unexplained'. BJ Psych, 203, 320–1. Stone J, Carson A, Sharpe M (2005). Functional symptoms and signs in neurology: assessment and diagnosis. J Neurol Neurosurg Psychiatry, 76, i2–12. Stone J, Carson A, Sharpe M (2005). Functional symptoms in neur- ology: management. J Neurol Neurosurg Psychiatry, 76, i13–21. 26.5.13 Personality disorders Iain Jordan ESSENTIALS People have characteristic ways of perceiving, thinking about, and responding to the world around them that are relatively stable over time and across situations; this is referred to as their personality.
A diagnosis of personality disorder is made when the personality is extreme and maladaptive and causes difficulty or distress to the person themselves or to others. People with personality disorders are often encountered in medical settings, which may be because they have self-harmed, suffered problems from drug or alcohol use, or been injured because of unwise behaviour. Personality disorders also complicate the medical management of medical conditions, for ex- ample, by nonadherence to recommended treatment. The effective short-term management of personality disorders in medical settings requires: (a) recognition of the diagnosis; (b) creation of a manage- ment plan; and (c) consistent response to the problematic behav- iours adhered to by all relevant staff.

26.5.13 Personality disorders 6521 Introduction Everyone develops their own way of perceiving, thinking about, and relating to the world that is stable over time and across situations, which we call personality. Personality is a summary description of the pattern of these traits in an individual. Personality is usually ap- parent by mid-adolescence and remains relatively stable thereafter. At times of stress specific personality traits such as impulsiveness or suspiciousness may become more noticeable. Personality may be regarded as disordered when the traits are ex- treme and problematic, leading to distress and difficulty for the af- fected person and/or those who interact with them. Diagnostic classifications for personality disorder list many dif- ferent types. These are conventionally grouped into three clusters (see Table 26.5.13.1): • Cluster A (eccentric) includes paranoid, schizoid and schizotypal personality disorders; • Cluster B (dramatic) includes antisocial (also called psychopathic or dissocial), borderline (also called emotionally unstable), histri- onic and narcissistic personality disorders; • Cluster C (anxious) is composed of avoidant (also called anxious), dependent, and obsessive-compulsive personality disorders. Describing personality

disorders in a categorical way provides a useful shorthand but is artificial as personality traits and personality disorders are dimensional, meaning that the traits merge both into one another and into normality. Aetiology The aetiology of personality disorders is a result of an inter- action of genetic and environmental factors. There is evidence that genetic factors contribute both to personality traits such as impulsivity, neuroticism, and extraversion, and to personality disorders, especially obsessive-compulsive and dissocial types. Environmental factors such as early childhood experiences and adverse experiences such as neglect and abuse are also important contributors. Epidemiology By definition, the onset of personality disorder is in adolescence or early adulthood, although individuals may not come to the attention of medical services until later in their life when circumstances lead to an exacerbation of the resulting difficulties. Studies of the general population report prevalence estimates 4–22%, depending on the definition of disorder. They also suggest that the overall prevalence is similar in males and females. Clinical features The main features of the different types of personality disorders are described in Table 26.5.13.1. Clinicians working in general hospitals may encounter patients with personality disorders in several ways (see Box 26.5.13.1). In the emergency department, personality disorder is commonly associated with self-harm, injury because of combative, chaotic, or abusive relationships and disturbed behaviour, or because of sub- stance misuse. In inpatient and outpatient settings, personality disorder may manifest as noncompliance with treatment, unusual behaviour, and extreme emotional responses to events or as abnormal relationships Table 26.5.13.1 Features of specific personality disorders Cluster Specific personality disorder Features A Paranoid Distrust and suspicion of others Bears grudges Perceives threats and attacks on character or reputation Reluctant to confide in others Schizoid Detached, emotionally cold Little interest in social relationships Restricted range of activities Indifferent to praise or criticism Schizotypal Odd beliefs, behaviour, or speech Unusual perceptual experiences Suspiciousness Acute discomfort with close relationships B Antisocial Disregard for rights of others Deceitfulness, irresponsibility Impulsivity, aggression Lack of remorse Borderline Unstable personal relationships Impulsivity, recurrent self-harm, and suicidal behaviour Chronic feelings of emptiness, marked reactivity of mood Frantic efforts to avoid abandonment Histrionic Excessive emotionality and attention-seeking Inappropriate provocative behaviour Suggestible Theatrical, uses physical appearance to draw attention Narcissistic Grandiosity, need for admiration Preoccupied with fantasies of unlimited success or brilliance Sense of entitlement, believes self to be special Lack of empathy, exploits others to achieve own ends C Avoidant Socially inhibited, avoids activities with others Feelings of inadequacy, fear of being shamed or ridiculed Views self as socially inept Preoccupied with being rejected Dependent Excessive and pervasive need for advice and reassurance Goes to excessive lengths to obtain nurturance and support Feels helpless when alone Submissive, fears separation Obsessive- compulsive Preoccupation with orderliness Perfectionism that interferes with task completion Overly scrupulous and inflexible Unable to discard objects

SECTION 26 Psychiatric and drug-related disorders 6522 with staff. It is the nature of personality disorder that clinical staff may find themselves behaving differently toward the affected pa- tient. For example, they may have unusually strong emotional re- actions to such patients, both negative and positive. They may also treat them differently, for example, by booking additional consult- ations or avoiding conversations with them. Case examples Case 1. A 22-year-old woman presents to the emergency depart- ment after taking an overdose. She felt rejected by her boyfriend who had not called her for three days. She has taken multiple over- doses in the past and reports being sexually abused by her uncle. The clinical team are split into those who feel very sorry for her and

those who consider her actions irresponsible and wasteful of healthcare resources. The diagnosis is borderline personality disorder. Case 2. A 45-year-old man has been admitted to hospital for a knee arthroscopy. He calls the nursing staff every 20 minutes for pain relief or to ask their advice about whether he should have the operation. He telephones his partner repeatedly to seek re- assurance and becomes inconsolable when he cannot reach them, fearing he will be left to take care of himself. The diagnosis is de- pendent personality disorder. Differential diagnosis The main differential diagnosis of personality disorders is a normal personality under stress (adjustment disorder). Other differentials include exacerbation of normal personality traits due to depression, psychotic disorders such as schizophrenia or delusional disorder (especially for the cluster A personality disorders), bipolar disorder (especially for borderline personality disorder), altered personality due to a medical disorder (for examples, see Box 26.5.13.2), and substance misuse disorders. Assessment Care should be taken in diagnosing someone with a personality dis- order. The diagnosis may have long lasting negative consequences for the patient and may be misused to apportion blame solely to them for any difficult clinical interactions. While personality dis- order often contributes to difficult interaction with doctors, such difficulties may also reflect a variety of factors unrelated to the patient's personality. It is consequently important to distinguish long-term, stable, mal- adaptive personality traits that have been present since adolescence or early adulthood from transiently severe disturbances of behav- iour. The diagnosis requires an assessment of personality traits and functioning over the long term and in many different situations, thus it is often necessary to obtain collateral information from other people such as their friends, family, and primary care physician. While the diagnosis of personality disorder requires that the patient's behaviour is not better explained by another mental dis- order, it is important to note that many patients with personality disorders also have comorbid mental conditions, for example, depression, anxiety disorders, and substance misuse disorders. Assessment for the presence of these comorbid disorders is im- portant as treatment of them may improve the patient's behaviour. It is also important to assess any risk that the patient with personality disorder may pose to themselves and to others. If a diagnosis of personality disorder is made, the following should be specified: • The behaviour upon which this is based. • The specific personality disorder type (or a cluster level diagnosis given with the relevant elements of each specific personality dis- order described, for example, if the patient has a cluster A type personality disorder with elements of borderline and antisocial personality disorders). • It can be helpful to also note positive as well as negative person- ality attributes. • Situations or stressors that are recurrently problematic for the person should be described along with their typical response (e.g. feelings of abandonment after discharge from medical care leading to self-harm). Treatment An adult's personality cannot, by definition, be substantially altered. The overall aim of treatment for personality disorders is therefore to help the patient to be aware of their most problematic personality traits, to identify the stressors that lead to difficulties, and to develop better strategies to manage them. Box 26.5.13.1 Modes of presentation of personality disorder to the general or specialist physiciana • Emotional distress • Self-harm, including nonfatal self-harm and suicide attempts • Interpersonal conflict manifest in medical consultations or on the wards • Substance misuse • Multiple medically unexplained symptoms • Consequences of chaotic lifestyle/impulsivity/interpersonal problems • Victim or perpetrator of violence or abuse (e.g. through the criminal justice system) • The medical consequences of impulsivity and intoxication a Note that these presentations are not specific to individuals with personality disorder. Box 26.5.13.2 Examples of medical disorders which may cause personality change • Central nervous system neoplasms (primary or metastatic) • Cerebrovascular disease • Epilepsy • Huntington's disease • Hypothyroidism • Infections affecting

the central nervous system • Paraneoplastic syndromes • Traumatic brain injury

26.5.13 Personality disorders 6523 The specific aims of treatment depend on the type of personality disorder and the associated problematic perceptions, thoughts, and ways of coping. They may include reducing emotional dis- tress, improving compliance with medical treatment, stopping self-harming behaviour, and in the case of antisocial personality disorder, reducing the risk of aggressive behaviour. The treatment of coexisting psychiatric disorders, including substance misuse, is important as such comorbidity can greatly exacerbate problematic behaviour in people with a personality disorder. Several psychological treatments are used to treat people with per- sonality disorder. These include behavioural therapy, dialectic be- haviour therapy, cognitive analytic therapy, psychodynamic therapy, and therapeutic community-based approaches. Dialectic behavioural therapy (see Box 26.5.13.3) is used for the treatment of so-called borderline or emotionally unstable person- ality disorder. It includes individual therapy (focused on the reduc- tion of self-harming behaviour and improvement in quality of life), group-based skills training (focused on increasing tolerance of dis- tress, improving interpersonal relationships, regulating emotions, and mindfulness) and telephone contact at times of crisis. There is a limited role for drug treatment of personality disorder. There is some evidence for the use of antipsychotics and mood-stabilizing medication to treat impulsivity and aggression in people with borderline personality disorder. There is less evidence for the use of antidepressant medication, but comorbid mental disorders such as anxiety and depression may respond well to pharmacotherapy. Admission to a psychiatric hospital ward is rarely helpful as it may exacerbate rather than reduce problem behaviours and may lead to problematic interactions with other patients. This is therefore usu- ally reserved for those cases where risk to self or others cannot be satisfactorily managed in the community. The successful management of personality disorder in the medical setting requires the recognition of the problem and a clear and con- sistent plan for how to respond to the patient's behaviour. A written care plan can be helpful. It is important that all clinicians involved in the patient's care understand that the person has a diagnosis of personality disorder and what specific problems that poses both for the patient and those caring for them. It is important for staff to rec- ognize what difficulties arise in interactions with the patient, to be aware of these, and to avoid being drawn into behaving in a dismis- sive, punitive, or overly caring way. Outcome By definition, personality disorders tend to persist. Patients with personality disorders with traits such as sensitivity to rejection and impulsive behaviour are at increased risk of suicide and other causes of premature mortality. However, many of the problematic behaviours associated with some types of personality disorder, such as self-harm, excessive use of healthcare services, aggression, and offending behaviours, tend to improve over time. FURTHER READING Goves, JE (1978). Taking care of the hateful patient. N Engl J Med, 298, 883–7. Stoffers JM, et al. (2012). Psychological therapies for people with bor- derline personality disorder (Review). Cochrane Database Syst Rev, 8. CD005652. Tyrer P, Reed GM, Crawford MJ (2015). Classification, assessment, prevalence, and effect of personality disorder. Lancet, 385, 717–26. Box 26.5.13.3 Dialectical behaviour therapy for the treatment of borderline personality disorder Dialectics is a philosophical term which describes the process of re- solving seemingly contradictory positions. Core dialectic of dialetical behavioural therapy: The individual learns to accept the way they are, while at the same time, striving to make positive changes in their life. Structure of dialetical behavioural therapy

1. Individual therapy addresses the core treatment goals: • Reduction of self-harming behaviour • Reduction of behaviours that interfere with therapy • Improvement of quality

of life

2. Group-based skills training: • Distress tolerance aims to improve the person’s ability to tolerate and manage extreme distress. • Interpersonal effectiveness aims to teach skills which allow im- proved interpersonal relationships. • Emotion regulation aims to improve the ability to control disturb- ances in mood and other distressing emotions. • Mindfulness is a set of skills whose aim is to cultivate greater awareness of the current state of the mind and body, instead of becoming preoccupied with worries and falling into a spiral of distressing emotion.
3. Individuals may also telephone their therapist during crises to learn how to use skills in real-life situations.
4. Therapists meet weekly for group supervision with other practitioners of dialetical behavioural therapy where issues relating to therapy can be discussed.

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SECTION 26 Psychiatric and drug-related disorders 6478 26.5.2 Dementia Bart Sheehan ESSENTIALS Dementia is a clinical syndrome, not a specific disease. It is character- ized by impairment of mental functions leading to memory loss, be- havioural changes, and impairment in the activities of daily living. It may be caused by several different diseases, the most common being Alzheimer's disease, vascular dementia, and Lewy body dementia. There are other potentially treatable causes, including depression, which must be excluded. Drug treatment with cholinesterase inhibitors may reduce the progression of dementia for a period, especially in Alzheimer's dis- ease. Antipsychotic drugs should be used with great care. The asso- ciated impairment and behavioural problems often requires social care, sometimes in institutions, and will place an increasing burden on medical services and society. Introduction Dementia is a clinical syndrome in which brain disease leads to ac- quired global impairment of higher mental functions despite clear consciousness. It can be thought of as chronic 'brain failure'. It is usually (but not always) progressive and usually (but not always) found among older people. The functions affected include cognitive function, particularly amnesia (memory loss), dyspraxia (difficulty carrying out complex motor actions), dysphasia (difficulty with speech), and agnosia (inability to recognize and interpret sensory inputs). There may also be psychiatric and behavioural symptoms, in descending order of frequency: depression, paranoid ideas, mis- identifications, hallucinations, aggression, and wandering. Finally there are deficits in activities of daily living (ADLs), with progres- sive impairment in ability to manage both instrumental ADLs (e.g. cooking, using telephone, managing bills) and basic ADLs (washing/ dressing/elimination). Aetiology Dementia is caused by many different diseases. Alzheimer's disease is responsible for about half of cases, and in post-mortem series the other common causes are vascular dementia (20–30% of cases), de- mentia with Lewy bodies (10% of cases), and frontotemporal de- mentia (2–5% of cases). Table 26.5.2.1 shows likely causes, grouped by neuropathological mechanisms. Epidemiology The prevalence of dementia is similar in most countries and most races. Men and women are about equally affected. The incidence in younger and middle-aged people is low and increases with age. Five to seven per cent of people aged 65 and over are affected, and 40% of people aged 95 and over. Worldwide this means that in 2014 about 45 million people had dementia, a figure that is projected to triple by 2050. Already, over half of people with dementia are in low- and middle-income countries, which

will also see the greatest rises in coming decades. Clinical features General The clinical features vary according to the cause. Distinguishing be- tween causes may be difficult clinically, especially in the early stages of disease. Patients with dementia usually have histories of acquired progressive memory loss (e.g. forgetting to take tablets or repeating things), with associated deficits in other cognitive areas, especially speech (expressive or receptive dysphasia), dyspraxia (e.g. difficulty carrying out complex motor sequences like cooking or dressing), and agnosia (e.g. not recognizing oneself in the mirror). There is frequently difficulty in coping with the basic activities of daily living; for example, relatives may have to take over managing finances or shopping, or the patient may become repeatedly lost in a previously familiar place. The patient or relative may also describe failure to cope with a situation they would previously have easily mastered, for example, a holiday abroad. As the dementia progresses, the patient shows worsening failure in multiple areas of life, with increasing dependency on others to accomplish even the basic activities of daily living. Other changes in behaviour such as apathy or irritability are commonly noted at some point of the illness, as well as behavioural changes like wandering, insomnia, and aggression. Alzheimer's disease (AD) Alzheimer's disease, the commonest cause of dementia, is a neurodegenerative condition in which there is progressive loss of cortical tissue associated with two hallmark neuropathological findings; extracellular accumulation of amyloid in plaque-like for- mations, and intracellular neurofibrillary tangles: paired helical fragments of hyper-phosphorylated Tau (a microtubule-associated protein). These pathological findings are the only absolute diag- nostic criteria for diagnosis of AD. To date, aetiological theories have centred on the likelihood that a primary malfunction in metabolism of amyloid is central to AD, though lack of therapeutic progress has led to questioning of this hypothesis. Progression is often relentless, Table 26.5.2.1 Causes of dementia Neurodegenerative causes Alzheimer's disease Vascular dementia Dementia with Lewy bodies Frontotemporal dementias Dementia in Parkinson's disease Hydrocephalus Infective causes Dementia in HIV Syphilis Creutzfeld–Jacob disease Intoxications and metabolic causes Alcoholic dementia Heavy metal poisoning Vitamin deficiencies, especially B12 Miscellaneous causes Head injury Anoxic brain injury

26.5.2 Dementia 6479 with a typical history of 2–3 years of symptoms at diagnosis, and progression to death after 7–10 years of illness. Vascular dementia In vascular dementia, the accumulation of cortical and subcortical areas of neuronal loss due to infarction (and sometimes haem- orrhage) leads to escalating cognitive and behavioural change. Infarction is much more common than haemorrhage, though per- haps 10% of patients show micro-haemorrhages on MRI, which suggest cerebral amyloid angiopathy. Up to 20% of community pa- tients with dementia are eventually diagnosed with mixed dementia (due to evidence of both Alzheimer's disease and vascular path- ology). Onset may be sudden and associated with clinical evidence of stroke. Progression is typically stepwise, indicating recurrent and accumulative cerebrovascular events. Patients may retain insight if cortical damage is not widespread. A history of stroke, hypertension, and neuroimaging evidence of cerebrovascular disease support this diagnosis. Prognosis is likely to depend on the wider cardiovascular risk status of the patient, but progression to death over 5–7 years, as in AD, is typical. Dementia with Lewy bodies This clinical syndrome is of dementia characterized by severe fluctu- ation (often over hours), evidence of Parkinsonism, and the presence of striking visual hallucinations. Supportive features include the pres- ence of sleep/wake cycle disruption, sensitivity to neuroleptics (often prescribed due to hallucinations), and deficient dopamine transporter uptake in the basal ganglia on SPET or PET imaging. The clinical syn- drome can therefore be clearly identified with high precision in life. The hallmark of this condition is the

deposition of an intracellular body called a Lewy body, which consists primarily of ubiquitin and α-synuclein. The clinical course is not clearly different to that of AD. Frontotemporal dementia These are a group of dementias, among which the best known is Pick's disease. A family history may be prominent, with earlier age of onset (50s/60s) than with other dementias. There may be striking personality change early in the condition, with coarsening, emo- tional lability, and disinhibition. These changes are essentially the frontal variant of frontotemporal dementia. Dysphasia may also be prominent early, often with loss of recognition for words and dif- ficulties with expressive speech. This is essentially the temporal variant of frontotemporal dementia. CT/MRI imaging may show marked frontotemporal atrophy, while functional neuroimaging is likely to show significant frontotemporal hypoactivity. Conditions in which there is abnormal expression of the microtubule-associated protein Tau (known as Tauopathies) are now recognized as leading to the clinical features of frontotemporal dementia. Differential diagnosis Delirium Delirium shares with dementia the finding of cognitive impairment and often significant behaviour problems. Unlike dementia, the onset of delirium is usually rapid, usually transient, and the clin- ical features include inattention, impairment of consciousness, and marked fluctuation during its clinical course. Depression Patients with depression are frequently apathetic with social with- drawal, poor concentration, and retardation leading to poor perform- ance on formal cognitive tests. This sometimes leads to misdiagnosis of depression as dementia; so-called depressive pseudo-dementia. Mild cognitive impairment This term is used for people at high risk of dementia who have cog- nitive deficits (usually defined as a memory performance at least 1.5 standard deviations below expected norms for age and popula- tion) with associated functional impairment, but no clear dementia. It conveys a 10–15% risk of incident dementia each year (about 10 times higher than that of age-matched peers). Clinical investigations History taking is the most important investigation in diagnosing dementia, and must involve a collateral history from someone who knows the patient well. Tests of cognitive functioning can help screen for dementia, increase the precision of diagnostic decisions, and also help to objectively monitor change over time. Blood tests are useful in excluding rare causes of dementia. Neuroimaging is now a routine part of the investigation of dementia. Cognitive tests Many structured cognitive tests are available for use with patients suspected of having dementia. The most commonly used in the last three decades has been the Mini-Mental State Examination (MMSE). Like other common tests, it covers several cognitive areas (memory, recall, orientation, concentration, praxis, receptive and expres- sive speech, and visuo-motor ability) and is short (10–15 minutes for most patients). It is reasonably effective as a screening tool and can crudely monitor progress (e.g. after initiation of drug therapy). False positives (e.g. due to delirium, depression, tiredness, sedation, learning disability, sensory impairment) are, however, common. More detailed cognitive tests can significantly improve the preci- sion of diagnosis and are especially important in early or borderline cases. Administering them often requires specialist resources. Blood tests Routine assessment of suspected dementia should include the fol- lowing tests: thyroid function, full blood count, urea, and electro- lytes, liver function tests, blood sugar, B12/folate. Syphilis serology and HIV testing are recommended in some clinical populations, but may have low yield in routine memory clinic practice. Neuroimaging CT and MRI scanning provide structural images of the brain. Both will identify mass lesions and help to exclude those causes of de- mentia likely to be amenable to surgical intervention (e.g. normal pressure hydrocephalus, subdural haematoma; see Fig. 26.5.2.1). Shrinkage of medial temporal lobe structures and of the hippo- campus may be observed in early AD. Functional imaging may help to identify frontotemporal deficits in frontotemporal dementia (FTD; see Fig. 26.5.2.2). In dementia with Lewy bodies, deficient dopamine basal ganglia uptake on single-photon emission computed tomography

(SPET) or PET

SECTION 26 Psychiatric and drug-related disorders 6480 imaging strongly supports the diagnosis. In recent years, amyloid ligand imaging on PET scanning has raised the possibility of the very early detection of AD, even before the clinical syndrome can be detected, but the high rate of false positives means that this test cannot be recommended in routine practice. Treatment Drug therapy The treatment of dementia depends on the underlying cause. Great effort has been directed at finding effective biological treatments for the common causes of dementia. In AD, cholinergic neuronal loss is extensive from the early stages, hence the use of cholinesterase inhibitors which prevent the breakdown of the neurotransmitter acetylcholine is rational. These are the current mainstay of AD treat- ment, with available drugs shown in Table 26.5.2.2. Cholinesterase inhibitors have clear benefit in AD, delaying pro- gression of the disease for one to two years on average, rather than reversing established deficits. Withdrawal of these agents is then as- sociated with a worsened prognosis long term, hence they should be continued as long as side effects allow. While most patients tolerate them well, cholinergic side effects, especially gastrointestinal prob- lems and in some patients brady-arrhythmias, can be problematic. Cholinesterase inhibitors are sometimes also used in vascular de- mentia, though the risk/benefit balance in the condition is unproven. (a) (b) (c) (d) Fig. 26.5.2.1 Hydrocephalus. (a) and (b): Two preoperative computed tomography (CT) scans in an elderly adult who presented with cognitive decline and other neurological features. (c) and (d): Following ventriculoperitoneal shunting (arrow in d), the communicating hydrocephalus resolved with complete recovery of the patient. Reproduced from Ian Whittle. Raised intracranial pressure, cerebral oedema, and hydrocephalus, from Dementia: Comprehensive Principles and Practices by permission of Oxford University Press. RH (a) (b) LH RH - Lateral Fig. 26.5.2.2 (a) Magnetic resonance imaging (MRI) demonstrating bilateral (right [RH] greater than left [LH]) frontal, temporal, and parietal atrophy. (b) Fludeoxyglucose positron emission tomography (FDG-PET) showing prominent bilateral (right greater than left) frontal and temporal hypometabolism (indicated by blue colour). Reproduced from Bradford C. Dickerson, Frontotemporal Dementia, from Dementia: Comprehensive Principles and Practices by permission of Oxford University Press.

26.5.2 Dementia 6481 In Lewy body dementia, trials of these agents have shown promise and they are usually recommended. More recent efforts to treat AD have focused on active, and lat- terly passive, vaccination strategies designed to elicit an immune re- sponse to amyloid in the earliest states of disease, but thus far these have not proven effective. Social care Despite progress with drug therapy the mainstay of treatment for dementia remains social; family members still provide the vast ma- jority of care for people with dementia. Up to half of people with dementia in Western countries will eventually spend some period of time in institutional care, though most remain outside such settings. The associated costs of care are clearly enormous and increasing. From the societal perspective, the greatest costs accumulate in the later stages of illness, in particular due to hospitalization and the costs of nursing home care, though the direct healthcare costs are always outweighed by those of social care. At all stages, the greatest costs are probably the indirect costs borne by family carers. Treating the psychological and behavioural problems of dementia Most patients with dementia will develop some behavioural or psychological symptoms during the course of their illness. These include low mood, obsessionality, or psychotic symptoms, and behavioural problems like apathy, agitation, insomnia, aggression, and wandering. These symptoms are unsurprisingly the strongest predictors of carer strain and institutionalization of the patient. Many are dealt with simply by the patience and skill of family or paid carers. In some cases

medication is requested, but few medi- cations have high-quality controlled trial evidence to support their use for this purpose. Risperidone has been shown to improve ag- gression in patients with AD and is licensed for this indication in the United Kingdom. All other prescribing is off licence. Medications with a high risk of worsening cognitive impairment, sedation, and falls (e.g. benzodiazepines) are still often used. Antipsychotics are known to increase risk of stroke and mortality in dementia and should only be used for short periods after evaluation of risk/ benefit.

Future developments: Can dementia be prevented? In the absence of an effective treatment for most causes of de- mentia, and the vast socioeconomic costs, preventive strategies have been widely promoted. Dementia is especially difficult to prevent as the earliest pathological changes in the disease may occur decades before the clinical features become obvious. Delays of even six months in the onset of clinical symptoms would re- duce the population prevalence appreciably (5–10%), while a delay of five years could reduce the population prevalence by up to 50%. Recent epidemiological evidence raises the possibility that the prevalence of dementia in Western countries may be al- ready falling, possibly due to lifestyle changes aimed at improving cardiovascular health. Risk factors that may contribute to risk of dementia and which may be amenable to intervention are listed in Table 26.5.2.3.

FURTHER READING Folstein MF, Folstein SE, McHugh PR (1975). ‘Mini-mental state’: a practical method for grading the cognitive state of patients for the clinician. J Psychiatr Res, 12, 189–98. Kales HC, Gitilin LN, Lyketos CG (2015). Assessment and manage- ment of behavioral and psychological symptoms of dementia. BMJ, 350, h369. Rabins PV, Blass DM (2014). In the clinic: dementia. Ann Intern Med, 161, ITC1; quiz ITC16. Robinson L, Tang E, Taylor JP (2015). Dementia: timely diagnosis and early intervention. BMJ, 350, h3029.

Table 26.5.2.2 Antidementia drug treatments (licensed in United Kingdom, July 2018)

Drug class	Starting dose	Target dose	Common side effects
Cholinesterase inhibitors			
Donepezil	5 mg OD	10 mg OD	Nausea, diarrhoea, frequency, dizziness, psychiatric effects
Rivastigmine	1.5 mg BD	3–6 mg BD	
Galantamine	8 mg /24 hours	24 mg/24 hours	
Glutamate antagonist			
Memantine	5 mg OD	20 mg OD	Constipation, headache

Table 26.5.2.3 Potential mediators of dementia risk (known risk factors)

Risk factor	Notes	Evidence is
Supportive		
Intelligence	No feasible intervention	
Hypertension	Treatable	
Depression	Treatable	
Diabetes	Treatable	
Contradictory		
Exercise	Inactivity increases risk	
Obesity	Recent evidence suggests low weight increases risk	
Diet	Mediterranean diet most commonly recommended	
Vitamins	B vitamins, E vitamins show promise in early research	
Not supportive		
Mental activity	Best evidence suggests brain training interventions ineffective	
Social engagement	Social benefits unlikely to be accompanied by lower dementia risk	

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26.5.3 Organic psychoses 6482 Curtis McKnight and

Jason Caplan

SECTION 26 Psychiatric and drug-related disorders 6482 26.5.3 Organic psychoses Curtis McKnight and Jason Caplan ESSENTIALS A psychosis is a syndrome characterized by delusions and hallu- cinations. Organic psychoses refer to those psychoses attributed to identifiable brain diseases and are thereby distinguished from pri- mary psychoses such as schizophrenia. Almost any condition that affects the brain can cause an organic psychosis. Delirium and de- mentia are the most common, although there are many other causes including other neurodegenerative diseases, autoimmune disorders, multiple sclerosis, endocrinopathies, metabolic disorders, and infec- tions. Making the diagnosis of an organic psychosis requires a high index of suspicion and appropriate investigation. The treatment is usually that of the primary disease when that is possible, while the symptoms of psychosis can be managed using antipsychotic drugs. Introduction The term ‘organic psychosis’ describes syndromes of psychotic symp- toms directly attributed to an identifiable pathophysiological cause. Differentiation of these disorders and the ‘primary’ or ‘functional’ psychoses (which includes schizophrenia and psychotic symptoms due to mood disorders) presumes that these latter diagnoses are not ‘organic’ in nature. However, as we gain a greater understanding of the anatomic and physiologic substrate of so-called mental illness, it is likely that the term ‘organic psychosis’ will become less meaningful and have to be replaced by another such as ‘secondary psychosis’. Neurodegenerative diseases Dementia In DSM-5, the dementias are subsumed under the designation of major neurocognitive disorder (MND), though the term dementia will likely remain in widespread use and have a role in the names of various existing subtypes. These disorders include a multitude of pathologies (Box 26.5.3.1), with Alzheimer’s disease being the most common. Anyone presenting with new onset psychosis late in life must be considered as having organic psychosis for a length of time until or unless a classic syndromal MND reveals itself. In some cases, high premorbid cognitive functioning and a large cognitive re- serve along with asymmetric brain pathology make dementia dif- ficult to identify in a patient presenting with psychosis. Psychosis due to a dementia presenting after age 65 is most likely to be due to

Alzheimer’s disease simply because this is the most common form of dementia in this age group. For patients younger than 65 years of age, frontotemporal dementia (FTD) is as common as Alzheimer’s disease. FTD is a collection of pathologies that are clinically divis- ible into three types: behavioural variant frontotemporal dementia (bvFTD), semantic variant of primary progressive aphasia, and non- fluent variant primary progressive aphasia, although the autopsy histopathologies for these three subtypes do not correlate well with their phenotypes. The most common of these is bvFTD. By some es- timates, 50% of patients with bvFTD are initially misdiagnosed with a primary psychiatric illness. Parkinson’s disease Parkinson’s disease is characterized by a resting tremor, rigidity and bradykinesia related to formation of Lewy bodies with resulting destruction of dopaminergic neurons in the substantia nigra. Current treatment is directed at improving dopamine transmission and function in the remaining neurons. Dementia is common in Parkinson’s disease although typically presents later in the course. Early psychotic symptoms in Parkinson’s disease (absent dopamine medications and prior to MND) are unusual and may cast doubt on the veracity of the diagnosis. Often psychotic symptoms in Parkinson’s disease are comorbid with depression or visual acuity changes, so psychotic depression or Charles Bonnet syndrome can be included in the differential. Finally, the current mainstay of treat- ment for Parkinson’s disease includes dopamine enhancers, which have a well-known proclivity for causing psychosis. As such, evalu- ation and (if possible) reduction of these medications is a recom- mended first step in treatment. If dopamine medication reduction is not possible, pimavanserin, a newly developed specific agent for the treatment of psychosis in Parkinson’s disease that functions as a selective serotonin inverse agonist, may have benefit. If these meas- ures prove unsuccessful, cautious attempts to treat psychosis with low doses of neuroleptics that have low affinity for the D2 receptor (i.e. clozapine) may be undertaken. Epilepsy Psychosis can be an ictal, post-ictal, and interictal phenomenon in patients with seizure disorders. As an ictal manifestation, psychosis has been most reported in complex partial seizures (since a general- ized seizure would mask any ictal psychosis), usually of the temporal lobe (with only approximately 30% of these patients presenting with seizure focus outside of this region). As one might expect of an ictal presentation, psychotic symptoms in these cases are limited to the duration of the seizure itself. Postictal psychosis occurs in 10% of patients undergoing video- EEG monitoring. A window ranging from hours to days between the cessation of seizure activity and the onset of psychotic symptoms is described. The mean duration of post-ictal psychoses is about 70 hours, and the extinction of these symptoms is accelerated by use of relatively low dose neuroleptic medication. Box 26.5.3.1 Subtypes of major neurocognitive disorder Alzheimer’s disease Vascular disease Frontotemporal lobar degeneration Lewy body disease Traumatic brain injury Substance/medication use HIV infection Prion disease Parkinson disease Huntington disease Due to another medical condition (e.g. multiple sclerosis) Combined or multiple aetiologies

 One analysis of the available evidence estimates a 6–12 times greater likelihood of psychosis in people with epilepsy than in the general population. Paranoia and hallucinations are especially prominent findings in chronic interictal psychosis. The average age of onset of chronic psychotic symptoms in patients with epilepsy (30 years) is later than in those without epilepsy. Autoimmune disorders The common factor in autoimmune disorders is a misdirected im- mune response that results in damage to endogenous tissue. When the targeted tissue lies with the central nervous system, clinical pres- entation is likely to include neuropsychiatric symptoms, and when that tissue lies within the limbic circuit, clinical presentation is likely to include symptoms of psychosis (Table 26.5.3.1). Autoimmune encephalitis Autoimmune

encephalitis is a group of disorders that present with neurological and psychiatric presentations prompted by antibodies directed against a broad group of neural proteins. Initially referred to as paraneoplastic limbic encephalitis (since it was believed that the presence of cancer proteins prompted production of the culpable antibodies which subsequently cross-reacted with nervous system targets), the name was shortened to limbic encephalitis when a series of cases were described in the absence of any cancer. The name was later updated to autoimmune encephalitis in light of several cases in which the neural injury occurred outside of the limbic circuit. Nonetheless, a previously undetected cancer remains a concern in newly diagnosed cases of autoimmune encephalitis. Autoantibodies implicated in autoimmune encephalitis can be broadly divided into two types: those directed against cell mem- brane targets and those directed against intracellular targets (Table 26.5.3.2). Of these two groups, antibodies directed against cell mem- brane targets have been most frequently associated with psychosis while the intracellular group more typically present with cognitive decline, lethargy, and disorientation. While the paraneoplastic association is no longer a diagnostic ne- cessity, cancer remains the most frequent underlying cause. Thus, the profile of individuals most at risk for these disorders mirrors those at risk for cancer. Some antibodies have been associated with specific malignancies (Table 26.5.3.3). Of particular diagnostic significance are cancers that typically present in younger individuals, since these presentations may be more easily mistaken for ‘first break’ schizo- phrenia because they manifest in the second or third decade of life. The clinical presentation of a young man with lethargy and confusion in the presence of anti-Ma2 antibodies raises the possibility of testicular cancer. Similarly, a young woman presenting with symptoms of psych- osis and anxiety in the presence of anti-NMDA-receptor antibodies suggests ovarian teratoma. Definitive diagnosis requires specific testing of serum and cerebrospinal fluid (CSF) for these autoantibodies since neuroimaging and routine CSF studies can be nonspecific. The EEG may be abnormal with a characteristic pattern described as ‘extreme delta brush’ with baseline rhythmic δ-activity at 1–3 Hz with rapid β-activity of 20–30 Hz superimposed on the crest of each δ-wave. The finding is relatively specific to the anti-NMDA-receptor antibody sub- type of autoimmune receptor encephalitis. Treatment of autoimmune encephalitis requires the identification and removal of any inciting lesion (i.e. a cancer) and modulation of the immune system. If an autoimmune encephalitis is suspected, Table 26.5.3.1 Some of the major neural structures of the limbic circuit Cortex Orbitofrontal cortex Piriform cortex Limbic lobe Hippocampus Entorhinal cortex Fornix Subcortex Amygdalae Nucleus accumbens Septal nuclei Diencephalon Hypothalamus Mammillary bodies Anterior thalamic nuclei Table 26.5.3.2 Autoantibodies implicated in autoimmune encephalitis Intracellular Anti-amphiphysin Anti-Hu Anti-Ma2 Anti-CV2/Anti-CRMP5 Anti-Ri Anti-Yo Anti-Tr Cell membrane Anti-NMDA-receptor Anti-VGKC Anti-LGI1 Anti-CASPR2 Anti-AMPA Anti-GABAB Table 26.5.3.3 Cancer/antibody associations in autoimmune encephalitis Anti-amphiphysin Small cell lung cancer (SCLC) Breast cancer Anti-Hu SCLC Non-small cell lung cancer Colon adenocarcinoma Prostate cancer Rhabdosarcoma Neuroblastoma Thymoma Anti-Ma2 Testicular cancer Non-small cell lung cancer Breast cancer Anti-CV2/CRMP5 Thymoma SCLC Breast cancer Anti-Ri SCLC Ovarian teratoma Breast cancer Endobronchial carcinoid Anti-NMDA-receptor Ovarian teratoma Anti-VGKC Prostate cancer Thymoma Adapted from: Foster AR, Caplan JP. (2009). Paraneoplastic limbic encephalitis. Psychosomatics, 50(2):108−113.

 serum and CSF should be sent for antibody studies while the patient is screened for any underlying neoplasm. If a cancer is found, it

should be treated aggressively as in some cases, excision of an underlying cancer has proved curative. A variety of immunomodulation tech- niques are recommended including administration of intravenous steroids, plasmapheresis, and use of intravenous immunoglobulin. If these approaches are unsuccessful, some have recommended pro- ceeding to pulsed doses of cyclophosphamide or rituximab. There is no evidence favouring one psychotropic agent over another in managing specific manifestations of psychosis. Steroid-responsive encephalopathy associated with thyroiditis (SREAT) SREAT has replaced the previously favoured eponymous designa- tion Hashimoto's encephalopathy. First described by Lord Brain and colleagues in 1966, the syndrome presents with a variety of symp- toms, which include frank psychosis in 30% of patients. There are thyroglobulin and/or thyroperoxidase antibodies on testing. While the first reported case was diagnosed with Hashimoto's thyroiditis, subsequent studies have not found an association between SREAT and thyroid function (Box 26.5.3.2). The current leading hypothesis is that the elevated thyroid antibodies serve as a marker of increased autoimmunity and perhaps an as-yet unidentified specific auto- immune process. As the name suggests, the treatment for SREAT is administration of corticosteroids, with plasmapheresis and intra- venous immunoglobulin considered second-line interventions. Again, there is no good evidence favouring one psychotropic agent over another in managing specific manifestations of psychosis. Multiple sclerosis (MS) Multiple sclerosis is a demyelinating disease that can present with a variety of neurologic, somatic, and psychiatric symptoms depending on the distribution of the demyelinating lesions. While disturbances of mood are described, studies of the prevalence of psychosis in MS vary from as few as 0% of patients to as many as 17%. Studies, comparing MS patients with psychotic symptoms to those without, have found increased lesion volume and greater concentration of lesions in the periventricular white matter and temporal regions. Immunomodulation to treat the MS is also ef- fective for the psychosis, though adjunctive use of a neuroleptic may also be beneficial. Systemic lupus erythematosus (SLE) The autoimmune manifestations of SLE affect several organ systems including the kidneys, joints, skin, and central nervous system (CNS) with estimates of 14–75% of patients experiencing neurological and psychiatric symptoms including psychosis; the majority have these symptoms either before diagnosis or within the following year. More than 100 specific autoantibodies have been reported in SLE and of those, the anti-RP antibody is the most extensively studied. While anti-RP testing does not discriminate between patients with or without psychotic symptoms, psychotic symptoms have been asso- ciated with higher titres. Endocrinopathies Thyroid Thyroid hormones have well-known roles in the regulation of mood, cognition, and behaviour. Thyroid hormone receptors (T3 triiodothyronine type) are highly concentrated in the limbic system. Thyroid hormones also modulate translation and action of sero- tonin, dopamine, and other neurotransmitters. Nonetheless, isolated psychosis is a rare presentation thyroid disease. In most cases there will be clinical evidence of thyroid deficiency or excess (fatigue, cold intolerance, weight gain in the former; heat intolerance, excessive sweating, weight loss, palpitations, and gastrointestinal upset in the latter). Useful investigations include thyroid-stimulating hormone, free thyroxine level, free triiodothyronine, and levels of thyroid car- rier proteins. Treatment involves correction of the thyroid dysfunc- tion while neuroleptics are used to manage the psychotic symptoms. Steroids Psychosis is a well-known effect of exogenous corticosteroid admin- istration. Disruption in the hypothalamic-pituitary-adrenal (HPA) axis leading to elevated endogenous glucocorticoids (especially cor- tisol) is equally likely to result in psychosis. Anabolic-androgenic steroids have a variety of adverse psychiatric effects, although psych- osis as a single isolated presenting symptom is rare. Noradrenergic A pheochromocytoma is a catecholamine (mostly epinephrine) se- creting tumour most commonly associated with anxiety. In

some cases, the agitation of severe anxiety can resemble psychosis. If psychosis presents in this fashion, it is usually accompanied by par- oxysmal tachycardia and hypertension. Parathyroid Though not specifically an endocrine disorder, Fahr syndrome (or idiopathic basal ganglia calcification) is linked with derangements of parathyroid hormone function (several other precipitating condi- tions are also recognized). Calcification of the basal ganglia is readily identifiable on neuroimaging. A host of other neurological and psy- chiatric symptoms including movement disorders and cognitive de- cline typically accompanies the symptoms of psychosis. Metabolic disorders The metabolic disorders are a diverse group of rare conditions that may present with psychosis. Initially termed inborn errors of metab- olism these are now more commonly referred to as congenital meta- bolic diseases, inherited metabolic diseases, or hereditary metabolic disorders. Most of these diseases are the result of single gene mu- tations that lead to a single enzymatic deficiency or dysfunction. There are hundreds of hereditary metabolic disorders and many re- main poorly characterized. They can be grouped by the metabolic process that is disrupted (Table 26.5.3.4) although many evade this Box 26.5.3.2 Thyroid function in cases of SREAT Hypothyroid c.20% Euthyroid or subclinical hypothyroid c.70% Hyperthyroid c.10%

 taxonomy. The chief clinical challenge is accurate and timely identi- fication of these rare conditions in order to direct appropriate treat- ment. Most cases of hereditary metabolic disorder are diagnosed in childhood or early adulthood. In a patient presenting with isolated first episode psychosis without an abnormal physical examination or investigation it is unlikely that the cause is an hereditary metabolic disorder. Atypical presentations with abnormal physical and laboratory findings should, however, in- crease suspicion of an hereditary metabolic disorder. A judicious ap- proach in such cases is to investigate in proportion to the atypicality of the psychosis (i.e. unusual variations in age and variety, chron- icity, or severity of symptoms). Many hereditary metabolic disorders can be treated, which usu- ally requires closely coordinated referral and multidisciplinary care. Often, when an individual with psychosis is subsequently found to have a hereditary metabolic disorder, treatment of that condition will result in improvement but not complete remission of psych- osis. Of the hereditary metabolic disorders, urea cycle disorders, remethylation disorders, and the porphyrias are generally the most acute, identifiable, and treatable. The urea cycle eliminates nitrogen by converting ammonia into urea. Several enzymatic deficiencies can result in a urea cycle dis- order. These may present at any age. The most common symptom cluster featuring psychosis features hallucinations accompanied by headaches and gastrointestinal symptoms. The treatment would in- clude timely specialist referral and dietary interventions such as pro- tein restriction. Valproic acid is contraindicated for these patients. Remethylation disorders result from defective remethylation of homocysteine to methionine resulting in increased serum homo- cysteine levels and ineffective utilization of folate and vitamin B12. This is usually due to genetic polymorphisms resulting in dysfunc- tion of the enzyme methylenetetrahydrofolate reductase (MTHFR) or deficiencies of cobalamin metabolism. Laboratory testing is avail- able for the 40 or so polymorphisms identified in homocystinuria. Remethylation disorders may present at any age and psychosis (dis- organized behaviour, hallucinations) is generally accompanied by elevated serum homocysteine. Other associated signs are throm- bosis and neurologic deficits. Acute intermittent porphyria is an autosomal dominant disease with variable penetrance linked to deficiency of the porphobilinogen deaminase enzyme. If psychosis presents in the context of this dis- ease it is accompanied by recurrent unexplained pain, typically of the abdomen. Avoidance of the inciting trigger (which may include a broad variety of

drugs) combined with carbohydrate infusion and hematin or heme arginate (United States or the United Kingdom, respectively) is the recommended course of treatment. Alcohol and tobacco use are to be strictly avoided. Wilson disease, Niemann-Pick type C, and cerebrotendinous xanthomatosis are more chronic in progression with psychosis typic- ally presenting late. Wilson disease is an autosomal recessive disorder caused by a mutation in the Wilson disease protein (ATP7B) gene that causes pathologic copper accumulation in several organs, most notably the liver and brain. Most diagnoses are made in preadolescent children or young adults, although it may occur as late as the sev- enth decade. Psychosis is found in only a small percentage of cases; aggression or personality changes are more common. Unusually early onset psychosis should precipitate testing for Wilson disease. Since screening is relatively noninvasive and inexpensive, the clinical threshold for proceeding with testing should be low. Niemann-Pick disease type C is a lysosomal storage disease re- sulting from mutations in either the NPC1 or NPC2 gene. Psychotic symptoms such as delusions and visual hallucinations may present in isolation for many years prior to onset of neurologic deficits. Of the hereditary metabolic disorders, this is most likely to be mis-diagnosed as a psychiatric disorder because of its rarity (1:150 000 people) and lack of obvious motor deficits until late stages. When present the commonest motor signs are ataxia, abnormal move- ments, and vertical supranuclear gaze palsy. These findings can be obscured by or misattributed to neuroleptic treatment. Testing is available but currently expensive and requires laboratory culture of the patient’s fibroblasts. Cerebrotendinous xanthomatosis is due to mutations of the gene GYP27A1. The enzyme deficiency from genetic mutation results in build-up of cholesterol in various tissues including the brain. Individuals presenting with psychosis, ataxia, and juvenile cataracts warrant further testing for this condition. Infection Theoretically, any infection of the central nervous system may precipitate symptoms of psychosis depending on the structures damaged. Moreover, any systemic infection can cause psychotic symptoms in the setting of a delirium. Here we focus on infec- tious agents that have been directly associated with psychosis (Box 26.5.3.3). Of these, neurosyphilis remains an important preventable cause of psychosis. The rate of syphilis infection fell after the dis- covery of penicillin, but since the early 1990s the rates of spirochete Table 26.5.3.4 Hereditary metabolic disorders Carbohydrate metabolism Glycogen storage disease Amino acid metabolism Phenylketonuria, maple syrup urine disease, glutaric acidemia type 1 Urea cycle Carbamoyl phosphate synthetase I deficiency Organic acid metabolism Alcaptonuria, 2-hydroxyglutaric acidurias Fatty acid oxidation and mitochondrial metabolism Medium-chain acyl-coenzyme A dehydrogenase deficiency Porphyrin metabolism Acute intermittent porphyria Purine or pyrimidine metabolism Lesch–Nyhan syndrome Steroid metabolism Lipoid congenital adrenal hyperplasia, congenital adrenal hyperplasia Mitochondrial function Oculocraniosomatic neuromuscular disorder with ragged red fibres Peroxisomal function Cerebrohepatorenal syndrome Lysosomal storage Gaucher’s disease, Niemann-Pick disease, Tay-Sachs disease Dietary elements Wilson’s disease Methionine synthase, remethylation Elevated levels of homocysteine, folate or B12 deficiency Leukodystrophies Cerebrotendineous xanthomatosis Creatine deficiency Guanidinoacetate methyltransferase (GAMT) deficiency

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SECTION 26 Psychiatric and drug-related disorders 6486 Treponema pallidum infection have been increasing. Given this re- surgence, some recommend that patients with new onset psychosis should be screened. The human immunodeficiency virus (HIV) penetrates the central nervous system, although the extent to which HIV disrupts neuronal function and neurotransmission is unknown. As with other organic psychoses, treatment of the underlying cause is paramount and in this case preventative; antiretroviral therapy reduces the rate of new onset psychosis in HIV infected persons. Organic psychosis from HIV infection is more frequent in individuals with prior psychiatric disorders, lower global cognitive performance, and brain atrophy, suggesting it may be modulated through a dementia syndrome. Other infectious agents causing encephalitis can present as or- ganic psychosis. In these cases, early encephalitis may have mostly nonfocal findings and lumbar puncture with cerebrospinal fluid analysis is required. Typically these conditions progress from initial organic psychosis to a more clearly recognizable encephalitis picture so early detection is important but difficult. FURTHER READING Clancy MJ, et al. (2014). The prevalence of psychosis in epilepsy: a sys- tematic review and meta-analysis. BMC Psychiatry, 14, 75. Dalmau J, Rosenfeld MR (2014). Autoimmune encephalitis update. Neuro Oncol, 16, 771–8. Demily C, Sedel F (2014). Psychiatric manifestations of treatable her- editary metabolic disorders in adults. Ann Gen Psychiatry, 13, 27. Fricchione GL, Carbone L, Bennett WI (1995). Psychotic disorder caused by a general medical condition, with delusions: secondary ‘organic’ delusional syndromes. Psychiatr Clin North Am, 18, 363–78. Friedman JH (2013). Parkinson disease psychosis: update. Behav Neurol, 27, 469–77. Friedrich F, et al. (2014). Psychosis in neurosyphilis—clinical aspects and implications. Psychopathology, 47, 3–9. Lee SW, Donlon S, Caplan JP (2011). Steroid responsive enceph- alopathy associated with autoimmune thyroiditis (SREAT) or Hashimoto’s encephalopathy: a case and review. Psychosomatics, 52, 99–108. 26.5.4 Alcohol misuse Jonathan Wood ESSENTIALS Excessive intake of alcohol is common and increases the risk of developing many medical conditions, as well as leading to psycho- logical and social harm. Medical conditions commonly associated with harmful use include upper gastrointestinal and liver disease, hypertension, and accidents. The psychological state of alcohol de- pendency makes it more difficult to reduce intake and physical de- pendency may lead to a withdrawal syndrome after admission to hospital. Withdrawal symptoms range from mild to severe and will commonly require treatment to prevent

complications of alcohol withdrawal such as seizures. Delirium tremens is a life-threatening consequence of alcohol withdrawal that requires immediate active management. The role of alcohol in the development of Wernicke– Korsakoff syndrome means patients will also need prophylaxis or treatment for this in the acute medical setting. Introduction The use of fermentation to make alcohol out of sugars has been a human activity for thousands of years. Drinking alcohol is cur- rently seen as a normal part of Western society. The current World Health Organization classification ICD-10 divides abnormal alcohol use into harmful use (F10.1) and alcohol dependence (F10.2). The most recent American Psychiatric Association classification of psy- chiatric disorders, DSM-5, combines these into a single diagnosis of Alcohol Use Disorder (AUD) with a spectrum of mild to severe. Alcohol misuse is a significant cause of both psychiatric and medical morbidity and mortality. As many as 20% of admissions to medical wards in the United Kingdom are directly related to alcohol con- sumption or to alcohol-related illnesses. Aetiology Alcohol is an addictive drug, but not everyone who uses it develops misuse. The aetiology of AUD includes genetic, psychological, and social factors. Genetic factors The genetic transmission of misuse is polygenic, with many sus- ceptibility loci, each with small or medium effects and low pene- trance. There are also genes involved in the metabolism of alcohol that are negatively associated with misuse. ALDH2 is an enzyme that catabolizes acetaldehyde. People with less effective variants of this enzyme have a transient accumulation of acetaldehyde when alcohol is ingested which leads to aversive symptoms such as fa- cial flushing and tachycardia, hence they are less likely to drink excessively. Box 26.5.3.3 Some infections associated with psychosis Syphilis Human immunodeficiency virus West Nile Virus Rabies Lyme disease Epstein–Barr virus Herpes encephalitis Japanese encephalitis St. Louis encephalitis Eastern equine encephalitis Subacute sclerosing panencephalitis Brucellosis Cryptococcus Mycoplasma pneumoniae Leptospirosis Hepatitis B

26.5.4 Alcohol misuse 6487 Psychological factors Alcohol ingestion is pleasurable for most people and therefore likely to be repeated. Other psychological factors such as depression or anxiety may play a role in the development of alcohol use disorders. A particular association is with social anxiety as those who feel anx- ious in social situations can ‘self-medicate’ with the often readily available alcohol. Social factors General social factors including the availability and price of alcohol, as well as the acceptability of drinking are clearly important in determining drinking behaviour. Individual factors such as adver- sity, family interactions, and peer group influence may also favour the development of alcohol misuse. Epidemiology In England, the 2007 Adult Psychiatric Morbidity Survey (APMS) estimated the prevalence of hazardous drinking in adults aged over 16 as 24% (33% of men, 16% of women). This included 4% of adults (6% of men, 2% of women) whose drinking could be categorized as harmful. The level of excessive drinking in the United Kingdom is higher than in most other countries of the world. Binge drinking is generally more common in the young and less common in older adults, but can often persist into middle age. In 2012, 3.3 million (or 6%) of all global deaths were attributable to alcohol misuse, making it the fifth leading risk factor for prema- ture death and disability; among people between the ages of 15 and 49, it is the leading factor. Alcohol harm and dependence Harmful alcohol use is defined as a pattern of excess alcohol use that damages the person’s physical or mental health. Alcohol dependence is defined by meeting three of the following criteria over the past year: • cravings or compulsion to drink • tolerance • withdrawal symptoms • difficulties controlling use • neglect of alternative activities • continuation of use despite harmful consequences Alcohol problems commonly coexist with other mental illnesses and social problems. A comprehensive assessment of the patient is there- fore

required, covering all the areas listed in Box 26.5.4.1. Medical consequences of excess alcohol intake Heavy use of alcohol leads to health-related problems in most bodily systems, with the risk of premature death increasing with intakes over 100g per week and substantially increasing at over 200g per week. Liver The liver is the primary site for alcohol metabolism and alcohol is one of the most common causes of chronic liver disease. Excessive alcohol use leads to a spectrum of changes, which range from fatty liver to hepatic inflammation and necrosis (alcoholic hepatitis) to progressive fibrosis (cirrhosis). Only a relatively small number of heavy drinkers progress to liver disease and so genetic and other factors must also play a role. The association between alcoholic liver disease and the polymorphism of genes encoding for alcohol metabolizing enzymes such as ADH, ALDH2, and CYP2E1 is not clear. Although men have higher rates of alcoholic liver disease, women have a greater susceptibility to it. Gastrointestinal With regular, heavy alcohol use a variety of medical complications involving the gastrointestinal tract and related organ systems can develop. Associated oesophageal disorders include oesophagitis, oe- sophageal varices related to liver disease, and oesophageal mucosal tears. Other common upper gastrointestinal problems are gastritis, duodenitis, and ulcer disease. Alcohol is also a common cause of pan- creatitis and the incidence among heavy alcohol consumers is around 3% per year. Cardiovascular There is a well-documented association between heavy alcohol consumption and hypertension. There is an ongoing debate as to whether moderate alcohol consumption has a beneficial effect on blood pressure and cardiovascular risk. Heavy drinking is also a risk factor for arrhythmias, cardiomyopathy, sudden cardiac death, and stroke. Musculoskeletal High alcohol intake is associated with osteoporosis. This is likely to be due to reduced bone formation during ongoing remodelling and perhaps mediated by parathyroid hormone and calcium metab- olism. Consuming more than two units of alcohol per day is a risk factor for both osteoporotic and other fractures. In addition, alcohol inhibits repair following a fracture, probably through suppression of synthesis of an ossifiable matrix. Alcohol can cause acute rhabdomyolysis (breakdown of muscle tissue) following a period of more heavy use or in relation to with- drawal. This typically advances over a few hours then recedes as the Box 26.5.4.1 Areas covered in comprehensive assessment Alcohol use, including: – consumption: historical and recent patterns of drinking, and if possible a collateral history from family member or friend – dependence symptoms – alcohol-related problems Other drug misuse Physical health problems Psychological and social problems Cognitive functioning Readiness and belief in ability to change drinking behaviour

 muscles heal. Chronic alcoholic myopathy generally affects prox- imal muscles and may develop over years. Biopsy shows muscle at- rophy affecting predominantly type II, especially type IIB, muscle fibres. The myopathy recovers gradually with a reduced alcohol intake. Pulmonary Alcohol use increases the risk of adult respiratory distress syndrome (ARDS), probably via increasing alveolar epithelium permeability. Alcohol also increases the rates and the morbidity and mortality associated with community-acquired pneumonia, particularly of gram negative organisms. Neurological Alcohol can cause several neurological problems, including: Delirium tremens Delirium tremens may be the presenting picture of alcohol depend- ence. This extreme reaction to withdrawal from alcohol typically oc- curs 24–48 hours after cessation. The delirium and is characterized by acute confusion and agitation commonly coexisting with perse- cutory delusions and hallucinations. It requires hospital treatment and has a mortality of 1–4%. Withdrawal seizures Seizures are a common complication of alcohol withdrawal. These commonly occur 12–48 hours after discontinuing alcohol but may occur up to 10 days after stopping. They take the form of generalized convulsions. Subsequent electroencephalograms

(EEGs) after the seizure and withdrawal period are normal. Alcoholic dementia and cerebral degeneration Cross-sectional magnetic resonance imaging (MRI) studies have shown smaller volumes of both grey and white matter in the cere- bral cortex in those with a history of excessive alcohol use. The area of greatest loss appears to be the frontal lobes. Chronic heavy alcohol consumption is associated with several neuropsychological deficits in abstract thinking, memory, learning, attention, and psychomotor skills. These deficits can progress to a dementia. The dementia associated with heavy alcohol use manifests as deficits in executive functioning to short- and long-term memory problems, as well as behavioural abnormalities such as disinhibition, apathy, or irritability. Wernicke–Korsakoff syndrome Wernicke–Korsakoff syndrome is caused by a deficiency of thia- mine in the central nervous system. It has an abrupt onset with an abnormal mental state, ophthalmoplegia (weakness of paralysis of extraocular muscles), and truncal ataxia (ataxia affecting the proximal musculature especially that involved in gait stability). Untreated it may progress to a chronic syndrome with severe anterograde amnesia, retrograde amnesia, and other cognitive deficits. Cerebellar degeneration Damage to the cerebellum can contribute to deficits of gait and balance in chronic heavy alcohol users. Commonly there is atrophy in the anterior superior vermis. Peripheral neuropathy Alcoholic neuropathy is caused by a combination of the direct toxic effects of alcohol and its metabolites on neurons and asso- ciated nutritional deficiencies. Onset is usually slow and begins with tingling or burning sensations in the peripheries. Later, sensory loss or distal weakness may also appear which progress proximally. Endocrinological Alcohol has widespread effects on the body’s hormonal systems. Alcohol decreases testosterone secretion, which may lead to gynae- comastia, impotence, and testicular atrophy. In women, even mod- erate consumption can lead to significant reproductive problems by increasing oestrogen, inhibiting follicle-stimulating hormone, and disrupting folliculogenesis. In addition, alcohol increases the re- lease of prolactin in both sexes, which may contribute to some of the aforementioned abnormalities. Both acute and chronic alcohol use activates the hypothalamic- pituitary-gonadal axis. In some drinkers a condition called alcohol- induced pseudo-Cushing’s syndrome may develop. This is often clinically indistinguishable from Cushing’s syndrome but present more mildly. These symptoms will often disappear within a few months of abstinence. Both acute and chronic alcohol exposure to alcohol diminish serum growth and insulin-like growth factor-1 levels in animals and humans of both sexes. Alcohol also has effects on the thyroid system with thyroid stimu- lating hormone response blunted to thyrotropin releasing hor- mone. Alcohol may lead to higher levels of parathyroid hormone by decreasing gut absorption of calcium. Chronic heavy alcohol use may increase insulin resistance in diabetics reflected in higher haemoglobin A1C than matched patients. Cancer Heavy alcohol use increases the risk of oesophageal cancer around tenfold. It is also associated with an increased risk of oral, pharyn- geal, laryngeal, breast, bowel, and liver tumours. Injuries Alcohol is a cause of accidental injuries in both chronic heavy drinkers and episodic drinkers. Alcohol-impaired driving is esti- mated to account for a third of all driving fatalities. There is a strong link with accidents involving fires; two-thirds of those who required admission with burns were intoxicated at the time. Alcohol is also implicated in drowning and falls, and is the biggest single cause of accidents in the home. Alcohol-related complications of pregnancy Although most women cease drinking excess alcohol in preg- nancy, alcohol-related birth problems are not uncommon. Birth defects include reductions in weight, height, and head circum- ference; decreased cognitive abilities and an increased risk of be- havioural problems such as attention deficits and impulsiveness. The so-called fetal alcohol syndrome is characterized by growth deficiency, facial dysmorphology, and central nervous system (CNS) disorders. The current global estimated incidence is about one in 1000 live births in the general obstetric population and

26.5.4 Alcohol misuse 6489 25 per 1000 births among alcohol-dependent women. It is the most common preventable cause of intellectual disability in the Western world. Clinical investigation Investigations may indicate excess alcohol use by showing the ef- fect the alcohol intake has had on the body. A blood count may show macrocytosis, potentially with thrombocytopenia, due to effects on the bone marrow. Liver enzymes, prothrombin time, and bilirubin may all be raised, with a particular elevation in γ-glutamyltransferase. Treatment Alcohol withdrawal The most common situation where a general physician may come across alcohol-related problems is after admission to hospital. The characteristic withdrawal symptoms related to alcohol can be both unpleasant and medically dangerous; they are listed in Box 26.5.4.2. Treatment of withdrawal is usually with benzodiazepines in a fixed progressively reducing dose regimen (see Table 26.5.4.1). Benzodiazepines ameliorate the imbalance between excitatory and inhibitory neurotransmitter systems, treating unpleasant symp- toms, and reducing the risk of complications such as seizure. The doses used may need to be greater where there is severe dependence and lower in patients whose benzodiazepine metabolism may be suboptimal, such as older people and those with liver disease. As an alternative to a fixed reducing regimen, a symptom- triggered regimen may be used; the drug is given according to the symptoms. The revised Clinical Institute Withdrawal Assessment for Alcohol (CIWA-Ar) can be used to monitor withdrawal. Carbamazepine is also used extensively in Europe to manage al- cohol withdrawal and is an effective alternative to benzodiazepines. A treatment regimen for outpatients might start at 800 mg in divided doses on the first day, tapering to 200 mg on the fifth day. Delirium tremens The treatment of delirium tremens is with a high-dose benzodi- azepine; lorazepam or diazepam are commonly used. Treatment with antipsychotic agents such as haloperidol or olanzapine may also be required. Refractory delirium tremens treatment may neces- sitate treatment with general anaesthetic agents, such as propofol, with appropriate airway management. Wernicke’s encephalopathy Wernicke’s encephalopathy is best prevented by giving prophylactic parenteral thiamine to all alcohol-dependent patients admitted to hospital. If Wernicke’s encephalopathy develops, high doses of par- enteral thiamine should be given. Psychological treatment of alcohol use disorders Less than 10% of people with moderate to severe alcohol problems receive treatment in a given year and only a third ever receive treat- ment. The main treatment for alcohol problems is a talking therapy which focuses on supporting the individual to change their behav- iour and remain abstinent. The most commonly used intervention for hazardous drinking that is given by physicians is brief simple education and advice. For those with a special interest in alcohol problems an extended brief intervention based on motivational interviewing can be beneficial. The principles of motivational interviewing are listed in Table 26.5.4.2. For those with alcohol dependence, Alcoholics Anonymous (AA) provides the most commonly available group-based therapy. AA is a fellowship for mutual support. The AA programme consists of studying and following the ‘twelve steps’ which aim to help the al- coholic to achieve a sober way of life. AA also advocates sponsor- ship: support from another AA member who offers one-to-one guidance to those working through the programme. Pharmacological treatment of alcohol dependence Drugs are only used in combination with psychological treatment, and few patients with alcohol use disorders receive pharmacotherapy, which is intended to reduce the return to drinking in those who are abstinent. Box 26.5.4.2 Symptoms of alcohol withdrawal Autonomic hyperactivity (e.g. sweating, tachycardia, or anxiety) Hand tremors Headache Insomnia Nausea or vomiting Short-lived hallucinations or illusions Psychomotor agitation Grand mal seizures Table 26.5.4.1 Sample alcohol withdrawal regimen for severe dependence Day Dose of chlordiazepoxide 1 30 mg qds 2 25 mg qds 3 20 mg qds 4 15 mg qds 5 10 mg qds 6 10 mg tds 7 10 mg bd 8 5 mgs bd 9 5 mgs nocte Table 26.5.4.2

Principles of motivational interviewing Expressing empathy Expressing empathy and acceptance helps build rapport Developing discrepancy This helps the person to see that the addictive behaviours do not fit with their longer-term aims and aspirations Rolling with resistance Avoiding getting into arguments, but offering new perspectives helps prevent a breakdown in communication Supporting self-belief Supporting the person’s confidence that they can make changes makes them seem possible

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SECTION 26 Psychiatric and drug-related disorders 6490 Disulfiram (Antabuse) is a commonly used drug, but is only mod- erately effective. It works by inhibiting aldehyde dehydrogenase, which prevents the metabolism of acetaldehyde, alcohol’s main me- tabolite. The build-up of acetaldehyde leads to flushing, tachycardia, nausea, vomiting, and sympathetic overactivity. This sympathetic overactivity can also lead to acute hypertension and potential car- diovascular or cerebrovascular harm. Patients must therefore be counselled on the effects of drinking alcohol while on disulfiram, on the need to avoid topical alcohol products, and about the potential for hepatotoxicity. It is most effective when professionals or a sup- portive partner or family supervises its use. Acamprosate reduces short-term and long-term (more than six months) relapse rates in patients with alcohol dependence when combined with a talking treatment. It is thought to work by modulating hyperactive glutamatergic N-Methyl-D-aspartic acid (NMDA) receptors. It is also only moderately effective. Naltrexone is an opioid antagonist, which competitively binds to opioid receptors and blocks the effects of endogenous opioids such as β–endorphin. It reduces cravings for alcohol and has a moderate effect on the risk of a return to heavy drinking in the short term. FURTHER READING Day E, Copello A, Hull M (2015). Assessment and management of alcohol use disorders. BMJ, 350, h715. Mann K (2004). Pharmacotherapy of alcohol dependence. CNS Drugs, 18, 485–504. Room R, Babor T, Rehm J (2005). Alcohol and public health. Lancet, 365, 519–30. Wood A, et al. (2018). Risk thresholds for alcohol consumption: com- bined analysis of individual-participant data for 599 912 current drinkers in 83 prospective studies. Lancet, 391, 1513–23. 26.5.5 Substance misuse Stephen Potts ESSENTIALS Many chemical substances are taken for their psychoactive proper- ties, even if prescribed for other purposes. Such use and misuse of psychoactive substances is so highly prevalent that it inevitably im- pinges on medical practice. All physicians therefore need a general understanding of the ways in which substance misuse may interrelate with medical needs, as well as a specific understanding of the inter- relationships most relevant to their own area of medical practice. Use of psychoactive substances may lead to acute intoxication and its consequences, or the effects of chronic use and depend- ence. Acute intoxication is associated with accidents and with acute psychiatric and medical illness. Chronic misuse may cause medical harm, which is often linked to the route of administration. Injection of substances poses particular hazards. Drug dependence may lead to great difficulties in the delivery

of medical care. Clear policies and communication with drug misuse services are an important part of managing patients who are dependent on drugs such as opioids. Introduction When the recreational or dependent use of psychoactive sub- stances inflicts harm, it becomes misuse. The incidence and preva- lence of use varies by substance, setting, culture, and country, and it changes over time. No area of medicine is unaffected by the phys- ical and other harms caused by substance misuse. This chapter aims to provide a framework to guide physicians, rather than pro- viding a list of specific medical harms by substance. The illustrative examples are drawn mainly from acute general medical inpatient settings. Substances that are misused Table 26.5.5.1 provides a pragmatic classification of drugs of misuse. Many of these agents and their effects are familiar to physicians. The class ‘novel psychoactive substances’, also known as ‘clubbing drugs’, includes many agents which have recently become easily available in the United Kingdom and elsewhere (United Kingdom law has made the alternative term ‘legal highs’ inaccurate). Drugs that are usually prescribed can also be misused, such as opioid anal- gesics or steroids for bodybuilding. In ICD-10, the physical problems caused by substance misuse are divided into: (a) acute intoxication, (b) harmful use, and (c) depend- ence. Physicians also see cases of acute poisoning, and of regular use that is hazardous but not harmful. Medical services are increasingly being encouraged to screen for hazardous substance misuse when seeing patients for other reasons, and to offer advice or refer on as appropriate. Table 26.5.5.2 lists harm from substance misuse and Table 26.5.5.3 lists harms by drug type. Acute poisoning and intoxication Emergency departments and acute medical admission units are fa- miliar with the presentation of acute opioid poisoning. This can arise from deliberate overdose, or a recreational user’s misjudge- ment of the potency of an unreliable illicit supply. Respiratory depression, aspiration of stomach contents through an impaired cough reflex, hypotension, and the consequences of prolonged im- mobility can all arise, and may be fatal. The direct effect of the opioid Table 26.5.5.1 Pragmatic classification of psychoactive substances (other than alcohol and tobacco) Group Examples Sedative/hypnotics Benzodiazepines, barbiturates Opioids Heroin, morphine, methadone, tramadol Stimulants Cocaine, amphetamine, methamphetamine Hallucinogens/ euphoriants Cannabis, ecstasy, MDMA, LSD, ketamine Novel psychoactive substances (‘legal highs’, ‘club drugs’) Multiple types, sold by brand name (e.g. ‘Ivory Wave’) Solvents GHB, GBL, volatile solvents Other Anabolic steroids

 is readily reversed by the antagonists naloxone or naltrexone, but care must be taken to avoid subsequent deterioration if the drug taken has a long half-life and the dose was high. Aspiration pneu- monia, rhabdomyolysis, compartment syndromes, and other con- sequences need medical or surgical treatment in their own right. Paradoxical excitation, where benzodiazepines cause disinhib- ited behaviour, and thereby increase agitation, is less familiar. The problem arises more often with recently prescribed administration than with illicit use, especially when treating acute alcohol with- drawal. If unrecognized, a vicious circle of escalating behavioural disturbance and increasing doses can occur. Treatment involves stopping all benzodiazepines and using instead antipsychotics such as chlorpromazine or haloperidol. Novel psychoactive substances can also cause serious acute medical and psychiatric effects, which may be fatal. These include rhabdomyolysis, acute kidney injury, seizures, hyperpyrexia, acute psychotic states, and severe agitation. The sheer number of such agents, uncertainty about what any given branded package actually contains, and the absence of specific antidotes, means that man- agement is symptomatic and pragmatic. Some of these agents have a long half-life and may therefore require treatment over a period of days. Harmful use In chronic use, most psychoactive substances are less directly toxic than alcohol. A notable exception is the bladder damage associ- ated with the euphoriant

drug ketamine. Mucosal inflammation and petechial haemorrhage cause symptoms of pain, frequency and haematuria, and can progress to bladder fibrosis and renal failure. Many harmful effects arise from the route of use, rather than from the toxicity of the drug itself. Examples include perforation of the nasal septum due to snorting cocaine, and the effects on the airways of smoking cannabis. Repeated injection can lead to local vascular problems through direct irritation (thromboembolism, phlebitis); soft tissue problems through poor injection hygiene (cel- lulitis, abscesses); and the familiar consequences of interpersonal transmission of blood-borne viruses (hepatitis C, HIV) or bacteria (infectious endocarditis). There are many psychiatric and neurological consequences of the sustained use of psychoactive substances. Some solvents are directly neurotoxic, with chronic use leading to cognitive deficits. Stimulants can cause panic attacks, sustained anxiety, isolated psychotic symp- toms (such as tactile hallucinations) and a paranoid psychosis re- sembling schizophrenia. Cannabis too can cause a schizophreniform psychosis with heavy use. Emerging evidence links it to the develop- ment of schizophrenia itself, especially when use begins at an early age and consequently acts on the developing brain. This relationship appears to be dose-related, so that the heavier and more prolonged the use, and the more potent the cannabis consumed, the higher Table 26.5.5.2 Types of medical harm arising from the use of psychoactive substance Type of harm Subtype Examples Acute Physical poisoning Respiratory depression—opioids, benzodiazepines stroke, MI—cocaine Intoxication Oversedation—opioids, benzodiazepines Paradoxical excitation—benzodiazepines Psychotic symptoms—novel psychoactive substances, hallucinogens, disturbed behaviour Hazardous use Regular use which has not yet caused harm but risks doing so Harmful use Direct toxicity Bladder damage due to ketamine Local consequences of route of use Nasal septum—cocaine (inhaled) Airways—cannabis (smoked) Thrombophlebitis Abscesses—anything injected Cellulitis Systemic consequences of route of use Infective endocarditis, hepatitis C, HIV—anything injected Mental/behavioural/ neurological effects Anxiety—stimulants Psychosis—stimulants, novel psychoactive substances, cannabis Depression—stimulants Cognitive deficits—solvents ‘Flashbacks’—hallucinogens Dependence see Table 26.5.5.3 Table 26.5.5.3 Severity and frequency of harm by drug type Drug type Acute effects Chronic effects Dependence Physical Psychiatric Direct Route- related Psychiatric Overall Withdrawal risks Sedative/ Hypnotics + + – + _ +++ +++ Opioids +++ + – +++ + +++ ++ Stimulants ++ ++ + ++ +++ ++ + Hallucinogens/ euphoriants + +++ + + ++ – – Novel psychoactive substances +++ +++ ? ++ +++ ? ? Solvents ++ + +++ ++ +++ +++ +++ Steroids – – +++ – +++ – – +++, Major harm; ++, Moderate harm; +, Minor harm; -, Minimal/no harm; ?, Uncertain.

 the risk. Continued use after the development of psychosis or other mental disorder also makes treatment more difficult. Depression typically arises more from the nonmedical (i.e. educa- tional, social, financial, and legal) harms associated with sustained substance misuse than from the drugs themselves, but depressive symptoms are common in the ‘come-down’ period after stimulant use. Steroids have many psychiatric consequences, including de- pression and psychotic episodes, which can be florid. Dependence Dependence on psychoactive substances constitutes a cluster of physical, psychological, and behavioural characteristics associated with sustained use. The key features seen in a medical context are listed in Table 26.5.5.4, together with their main manifestations and the implied roles for medical services. Tolerance and loss of tolerance This can be notable with opioids and sedative/hypnotic drugs, such as the benzodiazepines. Since these drugs are used as analgesics or as sedation for medical and surgical procedures, a dependent user’s tolerance can

present problems in judging the correct doses, routes, and frequency of administration when prescribing for medical use. This is especially the case if the dependence is not recognized, or the need to adjust doses insufficiently appreciated. ‘As required’ analgesia is not recommended in a dependent user and patient- controlled analgesia regimens need carefully set limits. Loss of tolerance occurs after prolonged periods of abstinence from a dependogenic substance such as an opioid while in hospital (or prison). It confers risk, as a usually tolerated dose may become fatally toxic. Patients should consequently be warned not to resume consumption at previous levels on discharge. Withdrawal syndromes These can be problematic in medical settings. This is particularly the case for opioids and benzodiazepines, although the severe with- drawal associated with the anaesthetic agent γ-hydroxybutyrate is becoming more common. Withdrawal from opioids causes sleepless- ness, agitation, and autonomic effects (sweating, nausea, vomiting, and diarrhoea). While intensely unpleasant, it carries a low mor- tality. Withdrawal from benzodiazepines has physical and psycho- logical manifestations similar to those of anxiety, but also brings a risk of death from withdrawal seizures. This risk is higher when the agent used has a short half-life (such as lorazepam) or when there is abrupt cessation of intake on entering a nonmedical environment (e.g. after arrest and imprisonment). γ-hydroxybutyrate withdrawal is similar in nature to alcohol withdrawal, though often much more severe in degree. It too carries a risk of withdrawal seizures. Withdrawal states may present with medical manifestations such as isolated seizures or a state resembling delirium tremens. The pri- mary management aim is treatment via standardized dosage regi- mens. These take two main forms: reducing fixed dose schedules, and symptom-triggered scales. In these regimens, long-acting substitutes such as diazepam and methadone are reduced in dose over a period of days or occasionally weeks, together with agents to provide symptom relief (e.g. loperamide for diarrhoea). Baclofen has recently been found to be effective in managing γ-hydroxybutyrate withdrawal. Withdrawal syndromes may also present incidentally, when pa- tients admitted for unrelated medical or surgical problems have un- recognized dependence. The main management aim here should be prevention, by screening and taking proactive action for those at risk. Early decisions may be required about substitute prescribing and withdrawal regimens. These should be guided by a detailed his- tory of the user’s normal daily and weekly levels of consumption, as well as previous episodes of withdrawal. ‘As required’ prescrip- tions should be minimized, and strict daily limits set on the total doses of dependogenic prescribed drugs. These limits should be ex- plicitly discussed with the patient. It is important that there is clear communication across nursing shifts and ward transfers to ensure the all-important consistency of management. This is best ensured via explicit, hospital-wide protocols. Dependent users of illicitly ac- quired drugs should be advised that the use of substitute prescribing to treat or prevent withdrawal syndromes in medical settings is nor- mally a temporary measure. It does not commit service providers to continued prescription on discharge and referral to specialist drug service should be offered instead. Medically enforced withdrawal Dependent users who have an established regimen of substitute drugs, prescribed by drug treatment agencies, should generally have those pre- scriptions respected. Medical teams treating seriously ill patients may be tempted to impose opportunistic withdrawals from long-established prescriptions of opiates while the patient is ‘captive’. This is rarely wise, as it often leads to destabilization on discharge, and a return to illicit use with associated social disruption. Communication with drug misuse prescribing services is therefore required in order to agree management plans both during and after medical admission. Rapid reinstatement after abstinence This is a well-established phenomenon, especially for opioids. Patients who become abstinent during a medical admission, and Table 26.5.5.4 Medically relevant features of dependence on psychoactive substances Feature Manifestation Medical role Tolerance

Lack of response to normal doses of analgesia and sedation Adjust doses Withdrawal syndrome As cause of medical admission Treatment Accompanying medical admission Prevention, screening, early intervention Substitute prescribing Rapid reinstatement after abstinence Rapid escalation from single use to full dependence after abstinence Relapse prevention Salience and craving Desire for drug outweighs need for healthy lifestyle Proactive follow up via community services Desire for drug outweighs need for medical treatment Manage nonconcordance Legal measures Substitute prescribing Desire for drug outweighs need for healthy lifestyle in pregnancy Substitute prescribing Liaison with obstetric services, primary care, and substance misuse specialists

26.5.6 Depressive disorder 6493 Joseph Cerimele an

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26.5.6 Depressive disorder 6493 who then resume use on discharge, may re-establish levels of tol- erance and vulnerability to withdrawal much faster than they ori- ginally did. For patients frequently admitted to hospital, the cycle of detoxification and re-toxification is probably more harmful than agreeing a more regular substitute prescription regimen, though this is best undertaken by a specialist substance misuse service rather than in a medical clinic. Communication with relapse prevention programmes run by substance misuse services is also important for newly abstinent patients on discharge from medical wards. Some hospitals employ drug liaison nurses who act as the link between medical and substance misuse services, ensuring clear communica- tion, consistency in prescribing, and proactive follow up. Attempts to obtain the drug of misuse The salience of and craving for the drug of dependence can lead to some of the most difficult substance misuse problems encountered on medical wards. A patient's desire to obtain a drug of addiction can be so strong as to outweigh all other considerations, leading to them taking major risks with their physical health. Such patients can pressurize ward teams to prescribe inappropriately and may not adhere to medical advice. Some patients will self-discharge from hospital to obtain drugs, while others may bring drugs into the ward or arrange for them to be delivered. Patients with direct venous access (peripheral cannulae, cen- tral lines) may misuse these to self-administer illicit drugs. These risks are greatest in patients who are mobile and face lengthy admissions, as in those on intravenous antibiotics for infectious endocarditis. Such cases can try the patience of medical teams and may raise the question of legal interventions, via common law, mental health, or in- capacity legislation. How such cases are managed will vary between jur- isdictions, hence it is important for medical teams encountering such cases to understand what the local law permits, requires, and prevents. For example, in the three United Kingdom jurisdictions, drug depend- ence in itself is excluded as grounds for applying incapacity measures or detention under the mental health act (although abnormal mental states arising from drug use are not). It is generally preferable to avoid recourse to legal measures and to offer

discussion with the patient, their family, and relevant drug misuse and psychiatry services. The guiding principles behind management should be openness of discussion, clarity of communication, consistency within and between teams, willingness to set limits, and firmness in applying them. Even when all these principles are adhered to, there will be cases where patients take their own discharge to the detriment of their health, and others where they might be asked to leave the hospital, or even be arrested within it. Where the risks accrue to someone other than the dependent user, such as a child, or a fetus, it can be particularly difficult to strike the balance between intervening too little and too late, and thereby allowing harm to arise, and intervening too strongly or precipi- tately and thereby causing it. Liaison with social workers, obstetric services, and substance misuse specialists is therefore important. FURTHER READING Department of Health (England) (2007). Drug misuse and depend- ence: UK guidelines on clinical management. Department of Health (England), London; the Scottish Government, Welsh Assembly Government, and Northern Ireland Executive. National Institute for Health and Clinical Excellence (NICE) (2007). Drug misuse: opiate detoxification. NICE clinical guideline 52. National Institute for Health and Clinical Excellence, London. Royal College of Psychiatrists (2014). One new drug a week: why novel psychoactive substances and club drugs need a different response from UK treatment providers. Royal College of Psychiatrists, London. World Health Organization (2010). Mental and behavioural disor- ders due to psychoactive substance use (F10-F19) in International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10). World Health Organization, Geneva. 26.5.6 Depressive disorder Joseph Cerimele and Lydia Chwastiak ESSENTIALS Depression is a common psychiatric illness seen by physicians. It not only greatly impairs quality of life, but also frequently complicates chronic medical conditions such as diabetes. Despite being common and clinically important it is frequently insufficiently treated, hence it is important to seek the symptoms of depression in all patients with chronic medical conditions. When found, the physician has an im- portant role in explaining the nature of depression and its treatment to the patient. Treatment is with antidepressant drugs and/or psy- chological treatment. When assessing depressed patients, it is always important to assess for suicide risk. Complex cases, failure to respond to initial treatment, or concern about suicide risk, indicate the need for referral to a psychiatrist. Introduction Depression is now the leading cause of disability worldwide. The World Mental Health Survey, conducted in 17 countries, found that 1 in 20 people reported having suffered an episode of depression in the previous year. Depressive disorders typically start at a young age and are often recurrent or chronic. They have a severe negative effect on quality of life (affecting individuals' ability to work and form re- lationships), have adverse effects on co-morbid medical illness, and increase the risk of suicide. Although efficacious and cost-effective treatments are available, most people do not receive them. Barriers to effective treatment include both a failure to diagnose depression and a failure to provide effective treatment. Aetiology Depression is the product of interactions between genetic vulner- ability and environmental exposures. The concordance rate for depression among monozygotic twins was 37% in a large Swedish study of over 15 000 sets of twins, indicating genetic vulnerability. Depression is also more likely to develop after negative life stresses

 and in those who lack social support. There is a strong association with living in an area of social deprivation. Physiologically, depression is associated with dysregulation of noradrenaline (nor- epinephrine), serotonin, and dopamine and dysfunction of the hypothalamic–pituitary–adrenal (HPA) axis. Epidemiology The lifetime prevalence of major depressive disorder in Western countries is approximately 13%, with a

12-month prevalence of 5%. The prevalence is higher among women, probably because of both biological (endocrine), and sociocultural factors. Depression is a recurrent illness; more than three-quarters of those who ex- perience a major depressive episode will experience a subsequent episode. Almost half of patients with major depressive disorder have co- morbid anxiety disorders, and many have coexisting substance use problems. In the United States, the estimated total annual cost of major depressive disorder was $210.5 billion in 2010, with approximately 45% attributable to direct costs, 5% to suicide-related mortality costs and 50% to workplace costs. Co-morbid medical conditions account for the largest portion of the growing economic burden of major depressive disorder. Persons with cardiovascular disease, diabetes, and other chronic medical conditions have an increased risk of major depressive dis- order that complicates the management of the medical condition (Table 26.5.6.1 and Fig. 26.5.6.1). Clinical features Depressed mood and anhedonia (loss of interest and pleasure) are the two cardinal symptoms of depression. At least one of these must be pre- sent for at least two weeks for a diagnosis of major depressive disorder. The diagnosis requires five or more of the following nine symptoms. • Feeling depressed, sad, or hopeless most of the time (depressed mood) • Loss of interest or pleasure in activities (anhedonia) • Change in appetite and/ or weight loss or gain (change of >5% of body weight in a month) • Sleeping more or less than usual (insomnia or hypersomnia) • Physical restlessness (psychomotor agitation) or slowed move- ments (psychomotor retardation) • Fatigue or loss of energy • Frequent feelings of worthlessness, or excessive or inappropriate guilt • Diminished ability to concentrate or make decisions • Recurrent thoughts of death or suicidal thought, plans, or an attempt
Table 26.5.6.1 Twelve-month prevalence of major depressive disorder in patients with chronic medical conditions Population 12-month prevalence Community 3–5% Primary care 6–10% Cardiovascular disease 15–23% Diabetes 12–18% Chronic pain 33–35% Unhealthy behaviours—binge eating, smoking, etc... Stress of diabetes management Poor symptom control Difficulty in exercising/exhaustion Complications of medical illness Mortality DEPRESSION DIABETES Difficulty in making dietary changes Lack of social interaction Lack of adherence to medication Lack of motivation to exercise/obesity Psychophysiologic: Insulin sensitivity, autoimmune nervous system inflammatory makers, cortisol Fig. 26.5.6.1 Bidirectional adverse effects of depression and diabetes.

26.5.6 Depressive disorder 6495 Almost half of patients with depression do not have their depres-sion diagnosed. It is important to remember that most patients with depression initially present with physical complaints such as fatigue or poor sleep, rather than with low mood. Because the diagnosis is often missed, active screening for depression has been recommended. The Patient Health Questionnaire- 9 (PHQ-9) is a self-rated scale widely used to screen for de- pression and to monitor response to depression treatment (Fig. 26.5.6.2). Treatment Patients with depression require timely, evidence-based treatment. Mild depression benefits from either a psychological intervention or an antidepressant medication, and moderate or severe depres- sion from a combination of antidepressant medication and a high- intensity psychological treatment. The first step in treatment is to educate patients about the nature of depression and its treatment.
A collaborative approach with the PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9) Over the last 2 weeks, how often have you been bothered by any of the following problems? (Use “ ” to indicate your answer)

1. Little interest or pleasure in doing things Not at all 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 1 2 3 0 Not difficult at all Somewhat difficult Very difficult Extremely

difficult FOR OFFICE CODING If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? 0

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= Total Score: 1 2 3 Several days More than half the days Nearly every day 3. Trouble falling or staying asleep, or sleeping too much Feeling tired or having little energy Poor appetite or overeating 4. 5. Feeling bad about yourself—or that you are a failure or have let yourself or your family down 6. Thoughts that you would be better off dead or of hurting yourself in some way 9. Moving or speaking so slowly that other people could have noticed? Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual 8. Trouble concentrating on things, such as reading the newspaper or watching television 7. Feeling down, depressed, or hopeless 2. Fig. 26.5.6.2 The Patient Health Questionnaire-9, a behavioural health measure for screening for depression and monitoring response to treatment. Developed by Drs. Robert L. Spitzer, Janet B. W. Williams, Kurt Kroenke, and colleagues.

SECTION 26 Psychiatric and drug-related disorders 6496 patient works best and can increase the patient's sense of participation in their care, leading to better subsequent adherence to treatment. Several factors influence the choice of treatment: • Duration of the episode of depression • Previous course of depression and response to treatment • Likelihood of adherence to treatment and any potential adverse effects • The patient's treatment preference Psychotherapy Three effective forms of short-term psychotherapy or talking treat- ment commonly used for depression are cognitive behavioural therapy, interpersonal psychotherapy, and problem-solving therapy. Cognitive behavioural therapy addresses negative and distorted thinking patterns and related behaviours that often accompany de- pression. Behavioural activation is a simpler type of cognitive be- havioural therapy that aims to help the patient regain important activities. Interpersonal psychotherapy targets current interpersonal relationship difficulties that contribute to the development and per- sistence of depressive symptoms. Problem-solving therapy is a col- laborative treatment in which patient and therapist break down life problems into smaller, solvable units, and address them one at a time. Antidepressant medications Antidepressant medications are all of similar efficacy in the treatment of outpatients with major depression. Medication choice is therefore based on factors other than efficacy, such as side effects, history of re- sponse, or a failure in the individual or a family member, possible drug interactions, psychiatric or medical co- morbidity, and patient age. The selective serotonin reuptake inhibitors (SSRIs) are usually the first- line treatment due to their tolerability (Table 26.5.6.2). It should be noted, however, that most SSRIs inhibit the cytochrome P450 system in the liver; paroxetine and fluoxetine have the greatest potential for drug interactions. Common side effects of SSRIs include anxiety, insomnia, nausea, and headache. However, these occur to a problematic degree in fewer than 20% of patients. Monitoring treatment response Brief reviews every 2 weeks are needed during the first 6 weeks of treatment to evaluate side effects of medications and review the dosage. Treatment response should be assessed after 4 weeks of a therapeutic dose of medication. Self-rating scales (such as the PHQ- 9) administered at initial diagnosis and at each follow-up offer a simple way to monitoring response. A 25% or greater reduction in baseline symptoms constitutes a reasonable basis for extending the initial treatment. If there has been no response or only a partial re- sponse, the dose should be increased to the upper therapeutic range. For patients who still do not respond to treatment, it is im- portant to: • check adherence to, and side effects from, initial treatment; •

increase the frequency of appointments using outcome monitoring; • consider re-introducing previous treatments that have been inad- equately delivered or adhered to; • consider switching to an alternative antidepressant; • consider combining with a second drug or augmenting the first drug. A change in treatment after nonresponse (either switching to dif- ferent SSRI or different class of antidepressant or combining the first drug with another drug such as mirtazapine) leads to an additional 20% of patients responding. A second change in treatment (either augmentation or switching) is effective in an additional 10–15% of patients. Switching antidepressants Switching to another antidepressant can be done within one week when switching from drugs with a short half-life. However, the potential for interactions should be considered when determining the choice of new drug and the duration of the transition. Switching may be to a different SSRI or to a newer-generation antidepressant (serotonin–norepinephrine reuptake inhibitor or mirtazapine). Combining and augmenting medications Combination treatment is combining two antidepressants, such as when mirtazapine is added to SSRI treatment. The use of com- binations of medications may be needed in some patients, but increases the risk of potential medication interactions and side effect burden, and may require specialist advice. Augmentation involves the use of a non-antidepressant medication (lithium, aripiprazole, quetiapine, and thyroxine) with an antidepressant. Continuation and maintenance therapy Once recovered from the depressive episode, patients should con- tinue medication treatment for at least nine months to minimize the risk of relapse; approximately 40% of remitted primary care patients suffer relapse. Stopping treatment Treatment with antidepressant drugs should generally not be sud- denly discontinued; almost all antidepressants (except fluoxetine) can produce discontinuation symptoms (sleep disturbance, anxiety, memory disturbance, malaise, muscle aches, vertigo, sweating, and gastrointestinal upset). Discontinuation is therefore done by redu- cing the dose gradually over several weeks. Collaborative care Collaborative care is a system of care in which a psychiatrist col- laborates with a primary care physician, aided by a case manager. It is effective in achieving cost-effective delivery of both drug and psychological treatments for depression. Table 26.5.6.3 list the prin- ciples of collaborative care. Other treatments Electroconvulsive therapy (ECT) remains the most effective treat- ment available for very severe or psychotic depression. Some re- versible short-term memory loss is a common side effect, but this reverts to normal in almost all cases. Patients with recurrent depres- sion who receive effective ECT treatment need prophylactic medi- cation or maintenance ECT once the acute course of the treatment has finished. Meta-analyses of randomized-controlled trials suggest that re- petitive transcranial magnetic stimulation has short-term anti- depressant properties.

26.5.6 Depressive disorder 6497 Outcome Depression is typically a chronic or recurrent illness. Half the patients who have had a single major depressive episode will have a second one; 70% of those who have two episodes will have a third; and 90% of those who have had three episodes will have a fourth. The number of previous episodes of depression, presence of re- sidual symptoms, and co-occurring health problems and social diffi- culties increase the risk of recurrence. Patients at risk for recurrence should continue antidepressant medications at the dose used to achieve remission for at least two years. The potential for severe con- sequences from recurrent depression, including suicide, are strong reasons to maintain antidepressant therapy. The risk of suicide is 10 times greater in patients with depression compared to the general population; suicide risk should therefore be assessed in all patients with depression. Most people who complete suicide have presented to their primary care physician within a month of their death. Older white males are at highest risk, and alcoholism, severe medical illness, psychosis, and lack of social support are

additional risk factors. Asking about suicide will not increase a patient’s risk. Enquiries about suicide can re- assure the patient and enable the physician and patient together to make a plan to prevent suicide, including deciding together whether emergency psychiatric consultation or hospitalization is necessary. There is an increased risk of thoughts of suicide in the first 28 days after starting and stopping antidepressants, so careful monitoring of patients during these periods is required. Advise a person with de- pression and their family to be vigilant for mood changes, negativity and hopelessness, and suicidal ideation, and to contact their practi- tioner if concerned. Table 26.5.6.2 Overview of commonly used antidepressant medications Medication Common starting doses Therapeutic dose Class Advantages Disadvantages Citalopram 10 mg/day 20–40 mg/day SSRI Fewer medication interactions 40 mg is the maximum dose as higher dose increases risk of prolonged QTc Escitalopram 5 mg/day 10–20 mg/day SSRI Fewer medication interactions; less likely to cause sexual side effects More expensive than citalopram Fluoxetine 10–20 mg/day 20–80 mg/day SSRI Longer half-life makes tapering unnecessary (good for patients with inconsistent adherence); relatively weight neutral More CY P450 interactions Paroxetine 10–20 mg/day 20–60 mg/day SSRI Sedating effects helpful for anxiety and insomnia Gastrointestinal side effects; anticholinergic effects increase fall risk and confusion in older people Sertraline 25–50 mg/day 100–200 mg/day SSRI Safe to use post-MI Few Mirtazapine 7.5–15 mg /day 30–45 mg/day SNRI at therapeutic dose Sedating effects helpful for anxiety and insomnia Sedation; increased appetite and weight gain Venlafaxine 37.5–75 mg /day 150–300 mg/day SNRI Helpful for neuropathic pain; XR version can be taken once daily Risk of increase diastolic blood pressure; short half-life can cause an uncomfortable discontinuation syndrome Duloxetine 20 mg /day 60–90 mg/day SNRI Effective for treatment of peripheral neuropathy and fibromyalgia Dose adjustment for CrCl <30 ml/min; expensive SNRI, serotonin–norepinephrine reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor. Table 26.5.6.3 Core principles of collaborative care Core principle Definition Patient-centred team care Primary care and psychiatrists collaborate using shared care plans that incorporate patient goals. Population-based care Care team shares a defined group of patients tracked in a registry to ensure no one falls through the cracks. Measurement-based treatment to target (or stepped care) Each patient has a target; progress toward this is monitored and treatment changed if patients are not improving. Evidence-based care Patients are given evidence-based care (both drugs and psychotherapies).

26.5.7 Bipolar disorder 6498 Kate E.A. Saunders an

26.5.7 Bipolar disorder 6498 Kate E.A. Saunders and John Geddes

SECTION 26 Psychiatric and drug-related disorders 6498 FURTHER READING Archer J, et al. (2012). Collaborative care for depression and anxiety problems. Cochrane Database Syst Rev, 10, CD006525. Katon WJ (2011). Epidemiology and treatment of depression in pa- tients with chronic medical illness. Dialogues Clin Neurosci, 13, 7–23. Katon WJ, et al. (2010). Collaborative care for patients with depression and chronic illnesses. N Engl J Med, 363, 2611–20. National Institute for Health and Care Excellence (NICE) (2009). Depression in adults: recognition and management. Clinical guide- line [CG90]. Last updated: April 2016. https://www.nice.org.uk/ guidance/CG90 National Institute for Health and Care Excellence (NICE) (2009). Depression in adults with a chronic physical health problem: recogni- tion and management. Clinical guideline [CG91]. https://www.nice. org.uk/guidance/CG90 26.5.7 Bipolar disorder Kate E.A. Saunders and John Geddes ESSENTIALS Bipolar disorder is a highly heritable, lifelong, relapsing, and remitting chronic mental illness. While traditionally characterized as a disorder with distinct periods of elated and depressed mood, it is now clear that interepisode mood instability is common. Comorbid psychiatric and medical conditions are common. When occurring in medical settings mania can be both disruptive and hazardous, and may re- quire active psychiatric management. Pharmacological approaches are the mainstay of treatment, although adjunctive psychotherapies are helpful in preventing relapse. Compulsory detention in hospital using mental health law may sometimes be required for both manic and depressive states. Introduction Bipolar disorder is a chronic recurrent mood disorder, previously known as manic-depressive illness. It is characterized by un- stable mood with periods of both depressed and elevated mood. Bipolar disorder is classified into three subtypes: bipolar I which is characterized by the presence of mania (Box 26.5.7.1), bipolar II which is characterized by hypomania (Box 26.5.7.2), and bi- polar not otherwise specified (NOS) which is used to describe those who do not fulfil the duration criteria for hypomania/ mania or where there is little discernible effect on the individual’s functioning. Aetiology The main cause of bipolar disorder is genetic, although environ- mental factors also play a role. The heritability (the extent to

which the disorder can be accounted for by genetic factors) is estimated to be 85%. People with a first-degree relative with bipolar disorder have a 14-fold increased risk of developing the condition. Genome- wide association studies have identified association with several common genetic polymorphisms with considerable overlap in sus- ceptibility with other disorders, including schizophrenia, but as yet there are no valid biomarkers. Epidemiology Bipolar I and bipolar II disorders affect around 2% of the popula- tion, with subthreshold forms present in a further 2%. The mean age of onset in community studies is 17 years. However, delays in the initial diagnosis are common, hence it is possible that the age of onset has become earlier since the 1990s. This may reflect in- creased use of antidepressants and stimulants precipitating epi- sodes of mania, or simply be attributable to greater awareness of the diagnosis. The prevalence of bipolar disorder is similar in males and females. An early age of onset is heritable and associated with poorer prognosis. The diagnosis of bipolar disorder in children has increased in recent years, especially in the United States, but the persistence of this increased rate of diagnosis into adulthood remains unclear as no comparable increase in adults has been observed. Clinical features The key feature of bipolar disorder is the occurrence of manic or hypomanic episodes. There are usually also episodes of depression (Fig. 26.5.7.1). Box 26.5.7.2 Features of hypomania • Symptoms as described for mania • A minimum duration of four days • A change in functioning, but not one severe enough to severely impair functioning or to necessitate hospitalization Box 26.5.7.1 Features of mania

1. A period of abnormally and persistently elevated, expansive, or irrit- able mood, lasting at least one week (or any duration if hospitalization is necessary)
2. Additional symptoms that include • Inflated self-esteem or grandiosity • Decreased need for sleep • More talkative than usual or pressure to keep talking • Flight of ideas or a subjective experience that thoughts are racing • Distractibility • Increase in goal-directed activity (either socially, at work or school, or sexually) • Agitation • Risky behaviour (e.g. rash purchases and sexual indiscretion)

26.5.7 Bipolar disorder 6499 Mania and hypomania A manic episode is a distinct period of abnormality of mood of at least a week’s duration that is severe enough to cause social or occu- pational difficulty or to lead to hospital admission. Mood is persist- ently elevated, expansive, or sometimes irritable. Other symptoms include persistently increased activity or energy and commonly a reduced need for sleep. The patient may appear unusually talkative, with rapid speech, and be unusually distractible. They may express inflated or grandiose ideas about their ability or status, and may be- have in an unwise or risky way such as spending excessively. If the mania is severe, there may also be delusions and hallucinations, the context of which is typically grandiose and in keeping with the ele- vated mood. There is no reduction of conscious level as with organic brain states. A hypomanic episode is a noticeable but less disruptive period of elevated mood. Depression The core symptoms of depression are low mood and/or anhedonia (loss of interest or pleasure in activities). In contrast to mania, with- drawal and reduced energy are common. Speech may be slow and ideas of low self-worth, pessimism, and even suicide expressed. Sleep is commonly disturbed and in bipolar depression may take the form of increased rather than reduced or disrupted sleep. A period of depressed mood typically occurs after an episode of elevated mood. Differential diagnosis The diagnosis of bipolar disorder requires a history of (hypo) manic symptoms. The main medical differential diagnosis for mania or hypomania is intoxication with stimulant drugs such as cocaine or amphetamines and from other organic brain states. These

include delirium from any cause, where there is typically clouding of con- sciousness, and occasionally head injuries, brain tumours, or epi- lepsy. The psychiatric differential includes cyclothymic and other personality disorders, and the main alterative diagnosis is schizo- phrenia if there are persistent hallucinations or delusions in a clear consciousness. For presentations with symptoms of depression, the main dif- ferential diagnosis is from unipolar depression. Bipolar disorder is commonly initially misdiagnosed as unipolar depression. Psychiatric comorbidity Other psychiatric disorders commonly co-occur with bipolar dis- order, particularly with bipolar II. Sixty-five per cent (65%) of people with bipolar disorders have at least one comorbid psychiatric dis- order, with many having two or more. Anxiety disorders are the most common and are associated with higher rates of suicide, al- cohol misuse, and a poorer response to lithium. Alcohol misuse is common. Personality disorders are present in between 25% and 50% of patients, although these estimates are imprecise as most studies 20 10 5 0 20 10 5 0 20 30 40 Weeks Mood scores Mood scores 50 10 0 20 30 40 Weeks 50 10 0 20 10 5 0 Mood scores 20 30 40 Weeks 50 10 0 20 10 5 0 20 10 5 0 20 30 40 Weeks Mood scores Mood scores 50 10 0 20 30 40 Weeks 50 10 0 20 10 5 0 Mood scores 20 30 40 Weeks 50 10 0 Fig. 26.5.7.1 Examples of mood instability in six patients with bipolar disorder in the OXTEXT cohort (data anonymized), as captured by prospective mood monitoring using the True Colours system (http://oxtext.psych.ox.ac.uk/). Blue line: scores for depressive symptoms as rated with the Quick Inventory of Depressive Symptoms (http://www.ids-qids.org/). Red line: scores for manic symptoms as rated with the Altman Self-Rating Mania Scale (http://www.cqaimh.org/pdf/tool_asrm.pdf).

 have sought to establish the presence of personality disorder in the presence of ongoing mood symptoms. Comorbid personality dis- order is associated with poorer treatment response, greater sub- stance misuse, and a worse prognosis. Medical comorbidity Bipolar disorder is associated with coexisting medical illness. The most prevalent are migraine, asthma, elevated lipids, hyperten- sion, thyroid disease, and osteoarthritis. Genome-wide association studies suggest that the bipolar disorder and metabolic disorders such as type II diabetes have common genetic links and may share pathophysiological pathways. Treatment The treatment of bipolar disorder is done in two stages: first, treat- ment of acute affective episodes, and second, maintenance treat- ment. See Table 26.5.7.1. Acute mania Current evidence favours the use of antipsychotic medication in the initial treatment of mania. For this purpose, antipsychotic drugs are superior to lithium or carbamazepine. Risperidone, olanzapine, and haloperidol have the best efficacy and tolerability. If a patient is al- ready taking a mood stabilizing agent such as lithium, the dose of this should be optimized. Acute depression The treatment of bipolar depression is a challenge with few ef- ficacious treatments. A recent meta-analysis of the efficacy of antidepressants found no efficacy. However, antidepressants are heterogeneous in terms of mechanism of action, tolerability and efficacy, and it may be premature to conclude that none is of any use. There is also a risk that antidepressant monotherapy in the absence of an antimanic treatment may precipitate mania or greater mood instability. This risk can be reduced by only using antidepressants in combination with a mood stabilizer or antimanic agent. Some atypical antipsychotics, such as quetiapine and olanzapine (in combination with fluoxetine), and lurasidone are effective in bi- polar depression, as well as having an antimanic effect. Lamotrigine, an antiepileptic drug, also appears to be effective in bipolar depres- sion. Drugs used solely for acute treatment should be tapered over several weeks once the patient is in remission. Maintenance treatment Drug treatment Lithium is the mainstay of maintenance treatment in bipolar dis- order. It has been in use ever since its discovery by John Cade in 1949.

Most of the evidence for its efficacy comes from randomized controlled trials of atypical antipsychotics in which lithium was an active comparator. Its use is limited by its narrow therapeutic window, adverse effects, and toxicity in overdose. Lithium is as- sociated with renal impairment in a small but significant number of people, although the relationship with end stage renal failure is not established. The risk of decline in renal function is greatest in younger women and in those with higher serum lithium concen- trations. Thyroid, parathyroid, and calcium metabolism can all be affected and must be monitored, both before and during treatment. In pregnancy, there is a possible risk of fetal cardiac malformations. A decision to withdraw lithium during pregnancy needs to consider both the risk to the fetus and the risk of relapse in the mother. The use of sodium valproate has dramatically increased in recent years despite the paucity of evidence from randomized controlled trials. The BALANCE trial found that lithium monotherapy was better than valproate monotherapy in preventing mood episodes, and combined treatment with lithium and valproate is better than valproate monotherapy. Valproate is associated with neural tube de- fects so is not recommended for use in women of childbearing age. Lamotrigine appears more effective than placebo in preventing depressive or manic episodes and has comparable efficacy to lithium, although adverse events are more common with lithium. There is only weak evidence that antipsychotic drugs are ef- fective in prevention, although quetiapine appears to be effective in preventing the recurrence of depressive episodes. Most patients will require maintenance treatment for many years; discontinuing stable treatment often leads to the emergence of a new episode of mood disturbance. Of those taking lithium more than half experience a recurrence within 10 weeks of discontinuation and approximately 90% within a year. Slow withdrawal of medication is associated with a lower rate of recurrence. One of the challenges in the treatment of bipolar disorder is the gap between the evidence, which mostly concerns single treatments, and clinical practice where polypharmacy is common. Almost all patients are taking more than one agent. Adherence is often poor and those with comorbid personality disorders, substance misuse, and greater illness severity are more likely to stop medication. Psychological treatment Although pharmacotherapy is the mainstay of treatment, psy- chotherapy has a role in improving adherence to drug treatment and in preventing relapses. The main goals of this adjunctive psy- chotherapy are to educate patients and caregivers and improve adherence to pharmacotherapy. There is also a role for stress management, the identification of triggers, and signs of relapse and strategies to maintain regular patterns of sleep and activity (see Box 26.5.7.2). Cognitive behavioural therapy, family fo- cused therapy, interpersonal and social rhythm therapy, group psychoeducation, and systematic care management all have evi- dence to support their use in bipolar disorder, although which specific ingredients of these complex treatments is effective re- mains unclear (Box 26.5.7.3). Table 26.5.7.1 Treatment of bipolar disorder Acute mania

1. Stop antidepressant (if currently taking one)
2. Offer an antipsychotic drug
3. Optimize lithium/mood stabilizer if already taking this Acute depression
4. Offer quetiapine OR olanzapine and fluoxetine
5. Offer lamotrigine alone or in combination with quetiapine Maintenance
6. Lithium
7. Consider adding valproate to lithium
8. If previous response in an acute episode consider quetiapine

26.5.8 Anxiety disorders 6501 Ted Liao and Steve E

26.5.8 Anxiety disorders 6501 Ted Liao and Steve Epstein

26.5.8 Anxiety disorders 6501 Adjunctive psychotherapy may enhance remission from acute de- pressive episodes but is not helpful during mania because patients often reject help and lack insight into their difficulties. Outcome The presenting type of mood disorder is familial and may have prog- nostic significance; a presentation with just mania has the best out- come. Once established, the characteristic pattern of episodes for that individual tends to recur. The occurrence of four or more mood episodes per year is referred to as rapid cycling, which occurs in be- tween 12% and 24% of people with bipolar disorder and is associ- ated with earlier age of onset, more comorbid substance misuse, and more severe depressive episodes. As most people with bipolar disorder present with a depressive episode, 40% initially receive a diagnosis of unipolar depression. The rate of switching from a diagnosis of unipolar disorder to one of bi- polar disorder is higher in younger people and plateaus at 1% per year by the age of 30. Bipolar disorder is a chronic illness, with a 40-year follow-up finding that only 16% had recovered (no episode in the last five years) and over 50% were experiencing recurrent episodes. The per- sistence of depressive symptoms is associated with poorer prognosis. There is also increasing evidence that significant impairment per- sists even in remitted states. On average people with bipolar disorder die nine years earlier than the rest of the population. Suicide risk is increased 10-fold in women and 8-fold in men. Suicide tends to occur early in the course of the illness, and between 25% and 50% attempt suicide at least once. Attempts are more likely in depressed and mixed affective states. Special circumstances Pregnancy Pregnancy and specifically the post-partum period is a high-risk period for women with bipolar disorder when as many as half relapse. Many of these relapses are depressive in nature and are most likely to occur in the first trimester, in women who have bipolar II disorder and in those who have discontinued medi- cation. The risk of relapse is especially high in the post-partum period. There is a need to balance the risk of pharmacotherapy to the unborn fetus against the risk of recurrence of an affective episode in the mother. FURTHER READING BALANCE investigators, et al. (2010). Lithium plus valproate com- bination therapy versus monotherapy for

relapse prevention in bipolar I disorder (BALANCE): a randomised open-label trial. Lancet, 375, 385–95. Craddock N, Sklar P (2013). Genetics of bipolar disorder. Lancet, 381, 1654–62. Geddes JR, Miklowitz DJ (2013). Treatment of bipolar disorder. Lancet, 381, 1672–82. Grande, I, et al. (2015) Bipolar disorder. Lancet, 387, 1561–72. McKnight RF, et al. (2012). Lithium toxicity profile: a systematic re- view and meta-analysis. Lancet, 379, 721–8. Phillips ML, Kupfer DJ (2013). Bipolar disorder diagnosis: challenges and future directions. Lancet, 381, 1663–71. 26.5.8 Anxiety disorders Ted Liao and Steve Epstein ESSENTIALS Anxiety is a common feeling, but also the central symptom of several psychiatric disorders: generalized anxiety disorder, panic disorder, phobias, and obsessive-compulsive disorder. Anxiety disorders are common and important in general medical practice as they often manifest with physical symptoms such as palpitations, chest pain, and dizziness that can be misdiagnosed as medical conditions and lead to unnecessary investigation and treatment. Anxiety disorder, especially phobic anxiety, can also lead to inability to adhere to med- ical treatments, for example, because of needle phobia interfering with blood tests and/or injected drugs treatment. Both pharmaco- logical and psychological treatments are effective. For chronic anx- iety, selective serotonin reuptake inhibitors are the drugs of choice, with benzodiazepines being reserved for short-term use. If available, cognitive behaviour therapy is similarly effective. Anxiety disorders usually respond to treatment but often recur. Introduction Feeling anxious is both a normal and common human experience. Words such as worry, nervousness, and apprehension all describe this everyday emotion. Normal worry can serve an adaptive func- tion, motivating individuals to take action to avoid negative con- sequences (e.g. studying for a test to avoid failing it) and can be an ordinary response to stressful situations (e.g. anxiety related to an- ticipated loss of independence following illness). Patients with anxiety disorders suffer from more than normal worry. They experience more pervasive and persistent anxiety, as well as other psychological and physiological symptoms. The se- verity of these is such that there is significant functional impairment. Whereas normal worry can spur people to action, anxiety disorders can cripple them. Box 26.5.7.3 Psychological treatment of bipolar disorder • Enhance ability to identify warning signs of recurrence and intervene early • Increase acceptance of illness • Enhance adherence to prescribed medication • Improve resilience to environmental stressors associated with symptoms • Stabilize sleep patterns and other daily routines • Enhance family relationships and communication • Reduce drug and alcohol misuse Adapted from Geddes & Miklowitz (2013).

 Untreated, anxiety disorders can impair a patient’s ability to ad- here to medical treatments, and as a result can have negative reper- cussions on a patient’s overall health and quality of life. Appropriate diagnosis and treatment of anxiety disorders can reduce morbidity, minimize disability, and restore functionality. Aetiology Both genetic and psychosocial factors contribute to the aetiology of anxiety disorders. Estimates of heritability range from 15% to 50%. Early-life influences (e.g. parents with anxiety) can exert a lasting influence on how patients respond to stressors. The brain regions most strongly implicated in the pathogenesis of anxiety disorders are the amygdala, the insular cortex, the cingulate cortex, and the prefrontal cortex. The neurotransmitters most strongly associated with anxiety disorders are γ-aminobutyric acid, serotonin, and norepinephrine. Epidemiology Anxiety disorders are very common. Approximately one in five adults suffer from an anxiety disorder according to large popula- tion surveys performed in several international settings. Onset is commonly in childhood and adolescence. Anxiety disorders dis- proportionately affect women and are associated with high rates of disability. Patients with anxiety disorders frequently seek treatment in primary and

specialty medical care settings, often initially pre- senting with physical symptoms. Clinical features The presenting complaints of patients with anxiety disorders can vary widely. The main psychological symptom of anxiety disorders is feeling anxious, tense, fearful, or agitated. Worry about future events is common. The associated behaviours include avoidance of feared situations and compulsive behaviours that serve to reduce the anx- iety (Table 26.5.8.1). Importantly, anxiety can also present with physical symptoms. These include fatigue, aches and pains, poor sleep, palpitations, breathlessness, dizziness, and chest pain. Episodic sudden onset of many physical symptoms suggests panic attacks. Common physical symptoms are listed in Table 26.5.8.2. Specific anxiety disorders Table 26.5.8.3 describes the key features of the specific anxiety disorders. Generalized anxiety disorder Generalized anxiety disorder (GAD) can be distinguished from other anxiety disorders by its lack of focus on a particular topic (in contrast with specific phobia or OCD), and by the long, consistent amount of worry (in contrast with circumscribed panic attacks). Panic disorder The most salient feature of panic attacks is their severity and short duration: they peak and typically resolve within minutes. Many patients have some familiarity with the concept of a panic attack and mistakenly describe other anxiety symptoms as panic attacks. Accurately eliciting a history of panic attacks is the crucial step in distinguishing panic disorder from other anxiety disorders. Not every patient who has a panic attack should be diagnosed with panic disorder. The hallmark of panic disorder is not simply the pres- ence of panic attacks, but also a persistent worry about future attacks and/or the actions taken to avoid future attacks. Agoraphobia (fear/ avoidance of crowds, open spaces, or enclosed places) represents one such maladaptive response to the experience of panic attacks. Specific phobia Many individuals are afraid of some of the objects or situations (e.g. needles) that are the focus of specific phobias, but those individ- uals perceive an intensity of distress in excess of social norms. One category of phobias with particular relevance to clinicians is blood- injection-injury phobia. This consists of specific aversions to blood, needles, or other invasive medical procedures. Specific phobias of this type may prevent patients from receiving other necessary med- ical care, and thus warrant prompt diagnosis and treatment. Table 26.5.8.1 Psychological symptoms of anxiety disorders Fear (distress about a concrete, imminent stressor) Anxiety (worry about abstract, future stressors) Other psychological symptoms Mood Sense of restlessness Irritability Derealization (feelings of unreality) Depersonalization (feelings of being detached from oneself) Cognitive Worry and obsessional thoughts Impaired concentration Behaviour Avoidance Compulsive behaviours Table 26.5.8.2 Common physical symptoms of anxiety disorders Constitutional Fatigue Insomnia Diaphoresis Chills Neurological/musculoskeletal Headache Vertigo Dizziness and light-headedness Unsteadiness Neck pain Muscle tension Tinnitus Paraesthesia Tremulousness or tremor Cardiopulmonary Chest pain Palpitations Tachycardia Dyspnoea Gastrointestinal Nausea Abdominal pain

 Social anxiety disorder (social phobia) Social anxiety disorder is a phobia of social situations. The distinc- tion between simple shyness and social phobia depends on severity and the effect on the person’s life. For instance, a person with normal shyness may keep to herself or himself at a large social gathering, but interact more openly with close friends, whereas a person with social anxiety disorder may avoid social functions altogether and consequently become socially isolated. Patients with social anxiety often self-medicate with alcohol, leading to an association with al- cohol misuse disorders. Obsessive-compulsive disorder Most patients with obsessive-compulsive disorder experience both obsessions and compulsions. It is important to note that the clin- ical definition of the term ‘obsession’ in the context of obsessive-compulsive disorder (OCD) differs from the lay meaning of the term. The obsessions in OCD are not

voluntarily experienced and are not a source of pleasure; rather they are persistent, unwanted, and aversive. For example, a woman had obsessions that the food in her home was rotten. Compulsions similarly do not bring patients pleasure, merely temporary relief from the distress associated with the obsessions. They are also not realistically related to the obsessions that drive them, or are clearly excessive. For instance, in the aforementioned case, the woman could only relieve her anxiety by ritualistically checking and rechecking the expiration date on every food item in her kitchen. Assessment of the patient with OCD must include a determin- ation of the time spent on obsessions and/or compulsions in order to determine symptom severity and degree of functional impairment. The woman mentioned here spent 90 minutes every evening com- pulsively checking her food instead of going to her evening class, making the behaviour clearly abnormal. Differential diagnosis Anxiety is most commonly understandable and situational. For ex- ample, seeing a physician to hear whether a serious disease such as cancer has progressed will cause many patients anxiety. Sometimes, however, the severity and persistence of anxiety means it is con- sidered a psychiatric disorder as described here. Other psychiatric differentials to consider are alcohol or drug withdrawal, developing delirium or dementia, and occasionally anxiety secondary to the delusions and hallucinations of a psychotic disorder. Some medical conditions can present with symptoms of anxiety (Table 26.5.8.4). There should be increased suspicion of these and other medical causes of anxiety if a patient is over 35 with no per- sonal or family history of anxiety, has no history of using the sub- stances and medications listed here, lacks significant stressors, and if standard pharmacological treatment of anxiety fails. Anxiety may also be a result of prescribed medication. Table 26.5.8.5 lists several substances and medications for which ingestion or withdrawal may produce significant anxiety. Particular emphasis should be paid to screening for stimulant ingestion and withdrawal from ethanol or benzodiazepine use. Assessment Detection Anxiety disorders cause a wide variety of physiological symptoms. Table 26.5.8.2 lists these symptoms, grouped by bodily system. Awareness of this form of presentation reduces the risk of mis- diagnosing anxiety as a medical disorder. It can also help prevent Table 26.5.8.3 Features of specific anxiety disorders Generalized anxiety disorder (GAD) – Excessive anxiety and worry about multiple issues that is difficult to control. – Occurs more days than not for at least six months. – Associated with some of the following: impaired concentration, irritability, muscle tension, insomnia, and fatigue. Panic disorder – Recurrent panic attacks: surges of intense fear or anxiety that peak within minutes, associated with palpitations, diaphoresis, tremulousness, dyspnoea, chest pain, nausea, abdominal pain, dizziness, or paraesthesias. – Associated fear of collapse or death. – Persistent concern about future attacks. Specific phobia – Marked fear or anxiety about a specific object or situation (e.g. flying, heights, animals, seeing blood), which is actively avoided if possible. – The fear or anxiety is out of proportion to the actual danger. – These symptoms persist for six months or more. Obsessive- compulsive disorder (OCD) – Obsessions are persistent, distressing thoughts that are unwanted. – Compulsions are repetitive behaviours or mental acts, rigidly performed to prevent or reduce distress. They are not however connected in a realistic way with what they are designed to prevent, or are clearly excessive. – Symptoms consume more than one hour per day or cause impairment. Social phobia – Significant recurrent anxiety about one or more social situations related to scrutiny by others, out of proportion with the actual threat posed, which causes avoidance and lasts for six months or more. – Associated fears about outwardly showing symptoms of anxiety. Table 26.5.8.4 Other medical conditions that may cause anxiety Common Thyroid dysfunction Asthma or other pulmonary disease Electrolyte abnormality (e.g. hypercalcaemia) Anaemia Diabetes Cardiac disease (e.g. tachyarrhythmias) Delirium (in hospital settings) Less common Pheochromocytoma Other endocrine conditions (e.g.

hypogonadism) Brain neoplasm or metastases

SECTION 26 Psychiatric and drug-related disorders 6504 missed medical diagnoses in patients with concurrent anxiety by highlighting those symptoms (e.g. diplopia) that are unlikely to be due to anxiety. The two-item Generalized Anxiety Scale (GAD-2) can be administered as a rapid screening measure for anxiety dis- orders (Table 26.5.8.6). It is important to note that anxiety com- monly coexists with depression and that all anxiety patients should be assessed for depression. Diagnosis When a patient is anxious, it is important to first ask how persistent and severe the anxiety is. To determine the associated functional im- pairment, the clinician must assess the patient's level of function in multiple areas of their life (work, romantic, and family relationships, friendships, hobbies, and so on). For patients whose level of func- tioning is poor, also asking about functional level prior to the onset of symptoms can help establish the extent to which anxiety is con- tributing to functional impairment. Treatment When a medical patient is anxious, the first step is to ask them why and see if information and addressing their fears, for example, about prognosis, is effective. Anxiety disorders, while highly common and frequently debilitating, are usually treatable. Both drug and psychological treat- ment are effective and may be used in combination, especially for severe anxiety disorders. Pharmacotherapy Drugs used to treat anxiety disorders are listed in Table 26.5.8.7. The most commonly used drugs are now the serotonin reuptake in- hibitors, which while also used as antidepressants have proven to be even more effective for the treatment of anxiety. Benzodiazepines such as diazepam and lorazepam are highly effective in relieving anxiety, but these agents are now generally restricted to short-term use because of the risk of dependence. While many physicians are more comfortable prescribing medi- cation than providing psychotherapy, it is important to ask the pa- tient what their preference is. For mild to moderate anxiety, either modality may be effective as a first-line treatment. For patients with moderate to severe anxiety, pharmacotherapy on a short- or long- term basis is usually needed. Serotonin reuptake inhibitors The serotonin reuptake inhibitors are now first-line treatment for anxiety disorder. There is no clear difference in efficacy among these agents, but side effect profiles differ. Many anxious patients are highly sensitive to medications, so it is important to start slowly and provide education about the frequency of side effects and time course of response, in order to avoid premature discontinuation. Patients need to understand that these medications must be taken daily, and are not effective on an 'as-needed' basis. Every physician should become comfortable using a few selective serotonin reuptake inhibitors (SSRIs) as some patients may prefer one or have had a prior good or poor response to a particular agent. Most are now available as generics. They can all be given once daily making adherence relatively easy. The most common side effects of SSRIs are gastrointestinal and sexual. Many patients will experience initial gastrointestinal dis- comfort including nausea, but it is important to reassure the patient that this side effect disappears for almost everyone within the first week of treatment. They should be told to take the medication with food, at least until the gastrointestinal side effects have remitted. For some patients, it may be beneficial to start at a lower than usual starting dosage and titrate up once the gastrointestinal side effects abate (e.g. starting at sertraline 25 mg daily). Sexual side effects include decreased interest and anorgasmia for women and erectile or ejaculatory dysfunction for men. These side effects do not dissipate but are fully reversible upon discontinuation. If a patient has benefited from an SSRI and wants to continue it des- pite these effects, it may be helpful to use PDE5 inhibitors such as sildenafil or tadalafil. Some may benefit from the addition of bu- propion 100–200 mg daily. For those who do not want to continue an SSRI because of sexual side effects, mirtazapine is an alternative. It is important to monitor response

and not settle for only partial improvement. If after four to six weeks of treatment there has not been substantial improvement, the dosage can be increased. If there is still no improvement, alternative agents or psychotherapy may be needed. Abrupt discontinuation of SSRIs may cause an uncomfortable withdrawal state, characterized by insomnia, anxiety, agitation, and sometimes electric-like sensations. Patients need to be educated not Table 26.5.8.6 The two-item Generalized Anxiety Scale (GAD-2) Over the past two weeks, how often have you been bothered by the following problems?

1. Feeling nervous, anxious, or on edge Not at all = 0 Several days = 1 More than one-half of the days = 2 Nearly every day = 3
2. Being unable to stop or control worrying Not at all = 0 Several days = 1 More than one-half of the days = 2 Nearly every day = 3 Two-item total score of greater or equal to 3 represents a positive screen. Table 26.5.8.5 Substances and medications relevant to the assessment of anxiety Use may cause anxiety Prescription stimulants (e.g. methylphenidate) Cocaine Caffeine Cannabinoids Antidepressants Corticosteroids (including asthma inhalers) β2-adrenergic agonists (including asthma inhalers) Androgens or oestrogens Sympathomimetics (e.g. ephedrine) Opioid antagonists (due to precipitated withdrawal) Withdrawal may cause anxiety Ethanol Benzodiazepines Barbiturates Opiates

 to stop an SSRI abruptly and that they should be tapered over weeks under the supervision of a physician. Pharmacologic treatment for panic disorder should continue for at least six months after the symptoms have resolved. For patients with chronic or recurrent panic disorder, or years of generalized anxiety disorder, treatment may continue indefinitely. Some patients may be reluctant to taper off if there are ongoing severe psychosocial stressors. Long-term treatment with SSRIs is generally quite safe and late side effects do not occur. The physician should always care- fully monitor medical conditions and concurrent medications when SSRIs are given for a long duration (e.g. if a healthy patient develops peptic ulcer disease this should lead to reconsideration of SSRI use, given their potential for causing gastrointestinal bleeding).
Other agents Benzodiazepines, while still widely used, should not usually be first line for an anxiety disorder as they can cause sedation and cognitive dysfunction, are addictive, and commonly abused. However, they are useful for short-term anxiety, such as that associated with a med- ical procedure. They may also be used in the occasional patient who is refractory to treatment with SSRIs, and without a history of al- cohol or drug abuse. For a patient with significant anxiety, it may be useful to start an SSRI and daily benzodiazepine. After a few weeks when the SSRI has had time to become effective, the benzodiazepine can be gradually tapered off. The serotonin and norepinephrine reuptake inhibitors venlafaxine and duloxetine are usually effective alternatives for anxiety. They may be preferentially indicated for patients with comorbid pain such as neuropathic pain or fibromyalgia. Blood pressure should be checked as they may cause mild increases. Duloxetine rarely causes hepatic dysfunction. Other drugs sometimes used to treat anxiety are gabapentin and pregabalin. Atypical antipsychotic drugs such as quetiapine are also effective. β-blockers are often prescribed but are only useful in redu- cing the physical symptoms of performance anxiety. Psychological treatments Where available, psychotherapy is the treatment of choice for many patients with anxiety disorders. The physician can offer brief psy- chological interventions themselves that are often effective, particu- larly for those with mild to moderate anxiety. Cognitive behavioural therapy (CBT) is effective for most anxiety disorders. For patients with generalized anxiety and panic disorder, the primary care physician can use elements of CBT.

For example, they may encourage patients to question fearful thoughts, replacing undue fears with more realistic appraisals, and listing the worst possible scenarios in order to help the patient see that they can handle feared future events. CBT-type treat- ment is increasingly available as internet-based self-treatment and may be useful when access to a therapist is difficult. Referral for specialized treatments Patients should be referred for consultation or treatment with a psychologist or psychiatrist for severe or refractory symptoms, pa- tient preference, or selected disorders that are generally beyond the expertise of the primary care physician (Table 26.5.8.8). Obsessive-compulsive disorder can be challenging, and psychiat- rists and other mental health professionals who are expert in CBT should generally treat it. All of the SSRIs are beneficial, but may need to be given at higher doses than for generalized anxiety disorder Table 26.5.8.7 Medications to treat anxiety Class Examples When to use Selected side effects Additional notes Serotonin reuptake inhibitor Sertraline, escitalopram First line for anxiety disorders Sexual, gastrointestinal, sedation Serotonin and norepinephrine reuptake inhibitor Venlafaxine, duloxetine First line for anxiety disorders Sexual, gastrointestinal May also help with pain Tricyclic antidepressant Nortriptyline, imipramine Second line Cardiac, anticholinergic, sedation Benzodiazepines Lorazepam, clonazepam, diazepam First line for severe anxiety Sedation, confusion, addiction potential, avoid alcohol Ideally on short-term basis only; caution in elderly Calcium current inhibitor Pregabalin Second line Sedation, dizziness Recently approved for anxiety in Europe Table 26.5.8.8 Some examples of when to refer for consultation or treatment Practitioner Modalities used Patient preference for psychotherapy Psychologist, psychiatrist, other trained mental health professional Cogntive behavioural therapy, trauma-focused psychotherapy, insight-oriented psychotherapy, and others Severe or refractory symptoms Psychiatrist Consultation, pharmacotherapy, psychotherapy Diagnostic uncertainty Psychiatrist Thorough review of history, medical issues Social anxiety Psychologist or psychiatrist Behavioural therapy, medication Obsessive-compulsive disorder Psychologist or psychiatrist CBT (exposure and response prevention), selective serotonin reuptake inhibitors (SSRIs), or clomipramine Simple phobias Psychologist or psychiatrist Behavioural therapy (systematic desensitization)

26.5.9 Acute stress disorder, adjustment disorders

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SECTION 26 Psychiatric and drug-related disorders 6506 and panic (e.g. sertraline 200 mg daily). CBT for OCD is a specific modality—gradual exposure to the feared stimulus such as dirt paired with relaxation, reframing, and eventual response prevention (i.e. not permitting hand-washing). This form of psychotherapy is not generally within the scope of physicians' expertise. Specific phobias such as snake or bridge phobias rarely present in medical settings, but needle or pill-swallowing phobias may inter- fere with medical care. CBT is the preferred modality, and includes talking about the fears and systematic desensitization, in which the patient is gradually exposed to the feared stimulus. As with OCD, a trained therapist usually delivers this. Outcome Without treatment, anxiety disorders tend to become chronic. Overall, approximately half of patients with anxiety disorders respond fully to either drug or psychological treatment and the remainder respond to varying degrees, but the relapse rate is high. Drug treatment should then be continued for a further 12 months and there should be follow up with maintenance therapy after treatment with CBT. FURTHER READING Craske MG, Stein MB (2016). Anxiety. Lancet, 388, 3048–59. Kroenke K, et al. (2010). The patient health questionnaire somatic, anxiety, and depressive symptom scales: a systematic review. Gen Hosp Psychiatry, 32, 345–59. National Institute of Health and Care Excellence (NICE) (2014). Anxiety disorders. Quality standard [QS53]. https://www.nice.org.uk/guidance/qs53 Roy-Byrne PD, et al. (2008). Anxiety disorders and comorbid medical illness. Gen Hosp Psychiatry, 30, 208–25. 26.5.9 Acute stress disorder,

adjustment disorders, and
post-traumatic stress disorder Jonathan I. Bisson ESSENTIALS Acute stress disorder, adjustment disorders, and post-traumatic stress disorder are all psychiatric consequences of traumatic experiences. Because trauma is so common in medical practice, in the form of accidents, severe illness, and sometimes medical and surgical treat- ments, these disorders are commonly seen by physicians. An initial severe reaction to a traumatic event such as severe accident is an acute stress disorder and is commonly characterized by dissociation. A more long-lasting emotional reaction to ongoing stress such as a new diagnosis of life-threatening illness is termed an adjustment dis- order. An often longer-lasting and more severe psychological reaction associated with repeated mental re-experiencing of the traumatic event is called post-traumatic stress disorder. These trauma-related disorders are not only an important cause of suffering but may also complicate medical care, hence they require recognition and appro- priate treatment. Introduction There is a group of psychiatric disorders specifically defined as being a response to severe psychological stress or trauma. These trauma- and stressor-related disorders include acute stress disorder, adjust- ment disorders, and post-traumatic stress disorder (PTSD). Acute stress disorder is the immediate emotional and behaviour reaction to an acute stress, for example, being told that a family member has died unexpectedly. Adjustment disorders are longer-lasting emo- tional and behavioural reactions to ongoing stressors, such as a new diagnosis of cancer. Post-traumatic stress disorder (PTSD) is usually a longer-lasting and severer effect of trauma, and is associated with the traumatic event being involuntarily relived in the imagination. These disorders are common in medical practice. Accidents and acute illness may be traumatic, as on occasion may treatment itself. These disorders are not only an important cause of suffering but may also significantly complicate medical care, for example, by leading to the avoidance of essential medical treatment. Aetiology Trauma generally refers to an event that is, or is perceived to be, severe enough to pose a threat to one’s own or another person’s physical or psychological integrity. Consequently many hospital- ized patients may be considered to have suffered trauma, but most people exposed to traumatic events do not go on to develop a mental disorder; they are surprisingly resilient in the face of adversity. However, many people who have suffered traumatic events become severely distressed and some go on to develop a mental disorder. The criteria for trauma associated with acute stress disorder and PTSD are shown in Box 26.5.9.1. Epidemiology The point prevalence of acute stress disorder following exposure to traumatic events is between 5 and 20%, depending on the type Box 26.5.9.1 DSM-5 acute stress disorder/PTSD qualifying traumatic event criteria Exposure to actual or threatened death, serious injury, or sexual violence through: • Direct experience • Witnessing, in person • Learning of event happening to a close family member or friend (actual or threatened death must be violent or accidental) • Repeated or extreme exposure to aversive stimuli (e.g. human remains collection, police, and details of child abuse)

 of trauma and its severity. The point prevalence of adjustment dis- orders in the general population is between 3 and 12%, with a much higher prevalence in medical populations. The 12-month preva- lence of PTSD is around 3%. Some traumatic events are more likely to precipitate PTSD than others; for example, the rate is over 50% after rape, 15% in conflict-affected populations, and 7.5% following accidents. Clinical features The key clinical feature of these disorders is a significant psycho- logical reaction to a traumatic event. Acute stress disorder This is an immediate response to a severe stressor. A person with acute stress disorder typically reports experiencing the world as

unreal or dreamlike, feeling detached from their body, or that they are having increasing difficulty recalling specific details of the traumatic event (dissociative amnesia). The traumatic event may be persistently re-experienced as recurrent images, thoughts, or dreams. There may also be avoidance of stimuli that arouse recol- lections of the trauma (e.g. avoiding thoughts, feelings, conver- sations, activities, places, and people). They may also suffer from anxiety or symptoms associated with increased arousal such as dif- ficulty sleeping, irritability, and poor concentration. The symptoms of acute stress disorder must last for a minimum of three days and a maximum of four weeks, and must occur within four weeks of the traumatic event. The person may cope with their emotional reaction by misuse of drugs or alcohol, which complicates the clinical picture. Adjustment disorders These disorders are a longer-term response to ongoing stressors of a range of severities. The symptoms of adjustment disorders are varied and often include low mood, anger, anxiety, and sleep disturbance. These symptoms must be out of proportion to the severity or intensity of the stressor and be associated with signifi- cant impairment in social, occupational, or other important areas of functioning. They occur within three months of the onset of the stressor(s) and do not last for longer than six months after the stressor and its consequences have ended. The person does not meet the criteria for another form of mental disorder. Prolonged adjustment disorders can occur, for example, in individuals ex- periencing enduring stressors such as chronic physical illness or pain. Post-traumatic stress disorder This a more severe disorder following exposure to severe trauma. The symptoms of post-traumatic stress disorder (PTSD) are summarized in Table 26.5.9.1. In addition to the qualifying traumatic event, additional symptoms (one or more intrusion symptoms, one, or both avoidance symptoms, two or more nega- tive alterations in cognitions and mood, and two or more al- terations in arousal and reactivity) with a duration of at least one month and clinically significant distress or functional im- pairment are required to make the diagnosis. Symptoms usually commence shortly after the traumatic event, but there may be delayed onset if the full diagnostic criteria are not met within the first six months. Assessment and differential diagnosis In assessing individuals, the main differential diagnosis to consider is a normal reaction to a traumatic event. Distress can be a normal, healthy reaction following a stressful event and it is factors such as the intensity and duration of symptoms along with impact on func- tioning that are important to consider in determining whether a reaction is pathological or not. These conditions must also be dif- ferentiated from other psychiatric diagnoses including depressive disorders and anxiety disorders. Acute stress reactions are defined as occurring within one month of a trauma. Adjustment disorder is defined as symptoms that do not last longer than six months after the stressor and its consequences have ended. Prolonged adjustment disorders can occur, for example, in individuals experiencing enduring stressors such as chronic phys- ical illness or pain. Comorbid psychiatric diagnoses are common, especially with PTSD; the commonest being major depressive dis- order, panic disorder, other anxiety disorders, and substance abuse or dependence disorder. These may require treatment in their own right.

Table 26.5.9.1 DSM-5 post-tramatic stress disorder (PTSD) symptom criteria

Criteria group	Individual criteria
Intrusion	Recurrent, involuntary, and intrusive distressing memories
	Recurrent distressing dreams (content and/or affect related)
	Dissociative reaction (acting or feeling as if event recurring)
	Intense or prolonged psychological distress to cues
	Marked physiological reactions to cues
Avoidance	Avoidance or efforts to avoid distressing thoughts or feelings about or closely associated with the trauma
	Avoidance or efforts to avoid external reminders (people, places, conversations, activities, objects, situations)
Negative alterations in cognitions and mood	Inability to remember an important aspect (typically due to dissociative amnesia)
	Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g. ‘I am bad’,

‘No one can be trusted’, ‘The world is completely dangerous’) Persistent, distorted cognitions about the cause or consequences that lead to self-blame or the blame of others Persistent negative emotional state (e.g. fear, horror, anger, guilt, shame) Markedly diminished interest or participation in significant activities Feelings of detachment or estrangement from others Persistent inability to experience positive emotions
(e.g. happiness, satisfaction, love) Marked alterations in arousal and reactivity Irritable behaviour and angry outbursts (with little or no provocation) Reckless or self-destructive behaviour Hypervigilance Exaggerated startle response Problems with concentration Sleep disturbance

SECTION 26 Psychiatric and drug-related disorders 6508 Treatment of trauma-related disorders Prevention Primary prevention through reducing exposure to traumatic events is the optimal approach to prevent these disorders, but is clearly dif- ficult to deliver. There has been considerable interest in providing specific early interventions to prevent PTSD. One-off interventions provided to everyone involved in a traumatic event such as psycho- logical debriefing (a structured process of working through the event in detail, normalizing reactions, and advising individuals of ways to deal with them) have not been shown to prevent PTSD despite being widely advocated. In fact, there is some evidence that one-off inter- ventions may be harmful to some people, particularly those who are most distressed after traumatic events. As a result, most contemporary guidelines advise against this approach and recommend instead the provision of practical, pragmatic support delivered in an empathic manner using the principles of psychological first aid (Box 26.5.9.2). This form of support can be taught to individuals with no previous training in mental health and is appropriately provided by physicians and other non-mental health professionals in general healthcare set- tings, and it has become increasingly popular and adopted despite the fact it still has a very limited evidence base to support it. Early treatment The lack of evidence for early psychological interventions following traumatic events has led to approaches that aim to identify those who remain distressed and at risk of developing an acute stress disorder or PTSD between two weeks and three months after the traumatic event. Trauma-focused cognitive behavioural therapy prevents the development of more chronic forms of PTSD in such individuals. There is no evidence to support the routine use of pharmacological intervention such as antidepressant drugs to prevent or to treat PTSD within three months of a traumatic event. However, there is some evidence that giving hydrocortisone shortly after a traumatic event can reduce the incidence of PTSD in individuals with severe medical conditions such as septic shock. It is unclear if this finding generalizes to traumatized individuals who are not severely physically ill. Drug treatment can have a place in treating severe symptoms such as insomnia that have not responded to psychological approaches. Guidelines recommend the use of sedative antidepressants as op- posed to benzodiazepines in such cases, because the latter may ex- acerbate symptoms of PTSD. If an individual is suffering from clinically significant symp- toms of acute stress disorder or PTSD following a traumatic event that do not respond to practical, pragmatic support delivered in an empathic manner using the principles of psychological first aid, it would be appropriate to consider referral to a service that can pro- vide the evidence-based interventions described. Psychological treatment There is some evidence that psychological treatment is effective in the treatment of adjustment disorders. It is also important to help the patient to address any ongoing stressors, if possible. Psychological treatments are also effective in the treatment of PTSD. These are specific therapies which are trauma focused (such as trauma-focused cognitive behavioural therapy or eye movement desensitization and reprocessing; Table 26.5.9.2). Nontrauma-focused psychological treatments (e.g. stress man- agement, psychodynamic

therapy) appear to be less effective but are probably better than nothing. For more complex presentations of PTSD, it is often argued that individuals may benefit from a process termed ‘emotional stabilization’ before beginning trauma- focused work. This ‘emotional stabilization’ may include help with basic needs such as physical difficulties and social problems (e.g. accommodation, food, clothes, money) along with stress management, skills training in interpersonal relationship and emotional regulation, and symptom-relieving drug treatment. Pharmacological treatment Selective serotonin reuptake inhibitors are effective in reducing symptoms of PTSD; the best evidence is for fluoxetine, paroxetine, and sertraline. The serotonin and noradrenaline inhibitor venlafaxine is similarly effective. Other drugs, including mirtazapine, amitrip- tyline, and phenelzine have been found effective in single random- ized controlled trials that have not been replicated. Outcome Acute stress reaction and adjustment disorders tend to resolve over time, although a severe acute stress disorder may predict the later Table 26.5.9.2 Evidence-based trauma-focused psychological treatments for PTSD Trauma-focused cognitive behavioural therapy (TFCBT) Exposure – The therapist helps the PTSD sufferer to confront their traumatic memories (written or verbal narrative, detailed recounting of the traumatic experience, repetition). – In vivo repeated exposure to avoided and fear- evoking situations that are now safe but which are associated with the trauma. Cognitive therapy – Focus on the identification and modification of misinterpretations that lead the PTSD sufferer to overestimate current threat (fear). – Also focus on modification of beliefs related to other aspects of the experience and how the individual interprets their behaviour during the trauma (eg issues concerning guilt and shame). Eye movement desensitization and reprocessing (EMDR) Standardized, trauma-focused procedure with several elements. These involve the use of bilateral physical stimulation (eye movements, taps, or tones), hypothesized to stimulate the individual’s own information processing in order to help integrate the targeted event as an adaptive contextualized memory. Box 26.5.9.2 Components of psychological aid as described by the Inter-Agency Standing Committee in 2007 • Protection from further harm • Opportunity to talk without pressure • Nonjudgemental listening • Identifying and meeting basic practical needs and concerns • Discouraging negative ways of coping • Encouraging normal daily routines and positive coping • Encouraging, but not forcing, company from family or friends • Offering the possibility to return for further support • Referring to local support or clinicians

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CONTENTS 26.6.1 Brief interventions for excessive alcohol consumption 6524 Amy O’Donnell, Eileen Kaner, and Nick Heather 26.6.2 Obesity and weight management 6529 Susan Jebb and Paul Aveyard 26.6.3 Smoking cessation 6533 Paul Aveyard

26.6.1 Brief interventions for excessive alcohol consumption Amy O’Donnell, Eileen Kaner, and Nick Heather ESSENTIALS The treatment and prevention of alcohol-related harm requires that attention is paid not only to alcohol dependence, but also to haz- ardous and harmful drinking. The prevalence of these problems is high, amounting to about one in four of the adult population of the United Kingdom. The usual goal of intervention is to reduce drinking to low-risk levels, although it may also be abstinence. Screening pa- tients for alcohol problems and providing brief interventions to those identified are potentially effective ways of improving patients’ health and reducing their risk of future harm. The intervention of simple, structured advice can be delivered without extensive training in 3 to 5 minutes. More intensive brief behavioural counselling requires training and takes 20 to 30 minutes, often with follow-up visits. Introduction Alcohol is a significant risk to public health. Globally it is the fifth leading cause of morbidity and premature death after high blood pressure, tobacco smoking,

household air pollution from solid fuels, and a diet low in fruits. Excessive alcohol consumption is causally related to over 60 dif- ferent medical conditions, including liver cirrhosis, cancer, and cardiovascular disease. There are additional wider social and eco- nomic consequences which extend beyond the individual drinker to their families, local communities, and society as a whole. Alcohol-related harm is associated with fewer years in formal education and, ultimately, educational underachievement. In the workplace, excessive alcohol consumption increases the risk of unemployment and can lead to disciplinary problems and low productivity. Heavy alcohol consumption is also associated with family dis- ruption, child abuse, and neglect, with homicide, crime, and drink-driving fatalities, and is a contributory factor for risky sexual behaviour, sexually transmitted diseases, and HIV infection. When those at risk of harm are added to those who have al- ready incurred it, the number of individuals whose lives may be adversely affected in some way by their drinking approaches one in four of the adult population. This is comparable to the number whose health is directly affected by smoking. It is important to note that most alcohol-related problems that occur in a popula- tion are not due to the most problematic drinkers but to a much larger group of hazardous and harmful drinkers: this is known as the prevention paradox. A prior focus on the concept of alco- holism has distracted attention from full range of alcohol-related problems. Consequently, the scope of treatment and preventive ef- forts should be broadened to reach all those at risk. Brief interven- tions in medical practice have a crucial role to play in this strategy (Fig. 26.6.1.1). The problem Excessive drinking Excessive drinking can be defined as drinking beyond the limits re- commended by medical authorities. These are based on the level of consumption identified by epidemiological evidence as the point where the risk of harm begins to increase. In this respect, there is a recognized continuum of both alcohol consumption and harm, meaning that abstinence represents the most effective approach to minimizing risk. If adults choose to continue to drink, less is better, and limiting consumption to no more than 20 g of alcohol per day will keep the lifetime risk of dying from an alcohol-related condition to less than one in a hundred. Currently in the United Kingdom, government guidance is that adult men and women should not regularly drink more than 14 26.6 Changing unhealthy behaviours

26.6.1 Brief interventions for excessive alcohol consumption 6525 units of alcohol a week on a regular basis (where one unit = 8 g (10 ml) of pure alcohol), should spread their drinking evenly over three or more days, and should have several drink-free days each week. However, there is a need for clearer, evidence-based guidelines for specific population groups, such as younger and older people, and pregnant women. Hazardous and harmful drinking The International Statistical Classification of Diseases and Health- related Problems, tenth revision (ICD-10), defines harmful use of a psychoactive substance as a pattern of use which is already causing damage to physical or mental health. Hazardous use is defined in the World Health Organization’s lexicon of alcohol and drug terms as a pattern of substance use that increases the risk of harmful consequences for the user. Thus, hazardous drinking can be defined as consumption at a level, or in such a pattern, that increases an individual’s risk of physical or psychological conse- quence, while harmful drinking is defined by the presence of these consequences. Single occasion heavy (‘binge’) drinking There is a substantially increased risk of short-term harms (acci- dents, injuries, and even deaths) faced by people who drink high levels of alcohol within a single day. The risks of injury have been found to rise between 2–5 times when 5–7 units are drunk in a 3– 6 hour period. Such high intensity drinking is sometimes called ‘binge drinking’, and binge drinkers may or may not drink on a regular basis. The opportunity Physicians see many people whose presentation is a consequence of drinking or whose future health is at risk from drinking. Patients with alcohol problems consult general

practitioners nearly twice as often as others. The most common presentations are gastrointestinal, hypertensive, psychiatric, and following ac- cidents. However, it is likely that less than half of these primary care patients will have their alcohol problem identified. In general medical and surgical hospital wards, as many as 30% of all male admissions and 15% of female admissions are excessive drinkers. Again, few of these patients will be identified as hazardous or harmful drinkers. Among emergency department attenders, 40% are excessive drinkers. Alcohol attributable hospital admissions in the United Kingdom were over 1.22 million in 2011/12, a 139% increase since 2002/03. Intensive specialist treatment (e.g. detoxification in hospital, combined with residential rehabilitation) Treatments and interventions (examples) Level of alcohol problem Severely dependent Harmful Hazardous Not yet developed Moderately dependent THE RANGE OF ALCOHOL TREATMENTS AND INTERVENTIONS Public health education programmes NOTES Not yet developed: people who currently have no level of alcohol misuse. Hazardous: drinking applies to anyone drinking over the limits recommended by the UK Department of Health. Harmful: showing clear evidence of alcohol-related problems. Moderately dependent: Likely to have increased tolerance of alcohol, suffer withdrawal symptoms, and have lost some degree of control over their drinking. Severely dependent: may have withdrawal fits (delirium tremens: e.g. confusion or hallucinations usually starting between two or three days after the last drink); may drink to escape from or avoid these symptoms. Individual drinkers may move between categories of alcohol problem over time and the boundaries between categories are not clear-cut. Likewise, the treatments are indicative and may, in some circumstances, be appropriate for the other categories of alcohol problem. Source: Adapted from Broadening the Base of Treatment for Alcohol Problems, Institute of Medicine, 1990 Short (5–10 minutes) medical advice (‘brief advice’) in mainstream health or other, nonhealth settings (e.g. by a GP) An extended period of medical advice (‘extended brief advice’) in mainstream health or other settings Specialist treatment in generalist or specialist settings (e.g. detoxification at home, with counselling) Fig. 26.6.1.1 The range of alcohol treatments and interventions. National Audit Office. Reducing Alcohol Harm: health services in England for alcohol misuse. London: National Audit Office, 2008.

SECTION 26 Psychiatric and drug-related disorders 6526 Brief interventions aim to detect alcohol problems at an early stage when they are most amenable to adjustment, and to pro- mote positive behaviour change, thus avoiding the development of more serious future problems. Brief intervention assumes that drinking behaviour results from an interaction between an indi- vidual, their behaviour, and the social and physical environment. Thus, drinking behaviour is influenced not only by an individual’s attitudes towards alcohol, their knowledge about its risks, and their perceptions of its reinforcing effects, but also by the attitudes of family members and friends towards drinking, and the patterns of use within their social group. Brief interventions are ‘oppor- tunistic’ because they take advantage of medical consultations whether related to alcohol problems or not. They are normally re- stricted to excessive drinkers with little or no evidence of alcohol dependence. Those more seriously impaired are usually referred to specialist services. Identifying hazardous and harmful drinkers Screening is the process used to identify patients whose alcohol con- sumption places them at increased risk of physical or psychological complications, and who might benefit from a brief preventive inter- vention. Laboratory tests are one way of screening. Tests that may be abnormal include the mean corpuscular volume (MCV), γ-glutamyl transferase (GGT), carbohydrate-deficient transferrin (CDT), and the ratio of alanine aminotransferase (ALT) to asparatate aminotransferase (AST). However, standardized questionnaires have better sensitivity and specificity than laboratory indicators, particularly in

terms of their ability to successfully identify exces- sive yet nondependent drinkers. In addition, questionnaire-based screening is less costly than laboratory analysis, is far less intrusive, and is more acceptable to patients. The alcohol use disorders identification test (AUDIT) was the first standardized instrument designed specifically by the World Health Organization to detect hazardous and harmful drinking in primary healthcare. AUDIT is a 10-item questionnaire that includes items on drinking frequency, quantity, and intensity (heavy drinking episodes), together with experience of alcohol-related problems and dependence (Fig. 26.6.1.2). At an indicative score of 8+ out of a possible 40, the ability of AUDIT to detect genuine excessive drinkers (sensitivity) and to exclude false cases (specificity) is 92% and 93%, respectively. Although relatively brief with only 10 items, the full AUDIT might be considered too lengthy for use in routine practice, especially if screening is carried out during the consultation. For this reason, shorter versions of the AUDIT have been developed, including the following: • AUDIT-C—the first three (consumption) items of the AUDIT. A score of 5+ indicates hazardous or harmful drinking. • Fast alcohol screening test (FAST)—a two-stage screening pro- cedure based on four of the AUDIT items. Item 3 is asked first and classifies over half of respondents as either nonhazardous (Never) or hazardous (Weekly/Daily or almost daily). Only those not classified at the first stage (those responding Less than monthly/Monthly) go on to the second stage which consists of AUDIT items 5, 8, and 10 (see Fig. 26.6.1.2). A response other than ‘never’ to any of these three items classifies the respondent as a hazardous drinker. • Single alcohol screening questionnaire (SASQ): ‘When was the last time you had more than ‘x’ drinks in one day?’ (where x = five for men and four for women (United States values), eight for men, and six for women (UK values)). Possible responses are: never; over 12 months; 3–12 months; within 3 months. The last response suggests hazardous or harmful drinking. These shorter scales are quicker to administer but less accurate. They are therefore recommended as a pre-screening procedure to quickly filter out negative cases, leaving the full AUDIT questions to the smaller pool of cases to provide an accurate and differential assessment of alcohol-related risk or harm. There is debate about whether all patients attending medical clinics should be screened or only predefined groups. The latter might include new patient registrations in general practice, special types of clinic or ward where hazardous and harmful drinkers are more likely to be found, and emergency department services for presentations associated with hazardous or harmful drinking. The National Institute for Health and Clinical Excellence (NICE) re- commends that screening should be a routine part of practice but that, where universal screening is not practicable, it should focus on patients at increased risk of harm from alcohol and those with an alcohol-related condition. Intervening to help patients reduce their intake Interventions aim to help the patient reduce consumption or abstain before seriously adverse consequences arise, and before alcohol de- pendence and problems have reached levels that make treatment difficult. Brief interventions can be effective in helping patients reduce their alcohol consumption. The evidence is particularly strong in primary care, where the ‘number needed to treat’ (NNT: the number of hazardous or harmful drinkers that need to receive a brief intervention for one to reduce drinking to low-risk levels) is about 10. The effectiveness of brief alcohol intervention in emer- gency care, general hospital, obstetric or antenatal care, social care and educational, and/or community settings shows less consistent benefit, but this may reflect a lack of evidence rather than lack of efficacy in these settings. It seems unlikely that an intervention that is effective in primary would not work in sec- ondary care, if delivered well. However, it is important to note that substantial reductions, even though short of reaching low- risk drinking, are also a valuable contribution to individual and public health. While brief interventions vary in length, content, and theor- etical orientation, two basic forms of intervention may be de- scribed: simple brief advice (brief,

structured intervention) and extended brief intervention (brief behavioural counselling). These two forms of brief intervention are included in the NICE guidance on the prevention of harmful and hazardous drinking. Simple brief advice This consists of simple advice to cut down or abstain from drinking. The advice is personalized to take into account the particular

26.6.1 Brief interventions for excessive alcohol consumption 6527 circumstances of the individual patient and their level of consump- tion in relation to population norms for their sex, and to appeal to any specific alcohol-related difficulties they may recognize as applying to them. These may include social and psychological dif- ficulties as well as medical problems. The delivery of simple brief interventions should, as far as possible, follow the principles de- scribed by the acronym FRAMES: • structured and personalized feedback on risk and harm • emphasis on the patient's personal responsibility for change AUDIT Scoring system Your score 0 1 2 3 4 How often do you have a drink containing alcohol? Never Monthly or less 2–4 times per month 2–3 times per week 4+ times per week How many units of alcohol do you drink on a typical day when you are drinking? 1–2 3–4 5–6 7–9 10+ How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year ? Never Less than monthly Monthly Weekly Daily or almost daily Daily or almost daily Daily or almost daily Daily or almost daily Daily or almost daily How often during the last year have you found that you were not able to stop drinking once you had started? Never Monthly Weekly How often during the last year have you failed to do what was normally expected from you because of your drinking? Never Monthly Weekly How often during the last year have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session? Never Monthly Weekly How often during the last year have you had a feeling of guilt or remorse after drinking? Never Monthly Weekly How often during the last year have you been unable to remember what happened the night before because you had been drinking? Never Monthly Weekly Have you or somebody else been injured as a result of your drinking? No Yes, but not in the last year Yes, but not in the last year Yes, during the last year Yes, during the last year Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested that you cut down? No Scoring: 0–7 Lower risk, 8–15 Increasing risk, 16–19 Higher risk, 20+ Possible dependence SCORE This is one unit of alcohol… Half pint of regular beer, lager, or cider 1 small glass of wine Pint of regular beer/lager/ cider 2 3 1.5 440 ml 440 ml 4 2 2 9 Pint of premium beer/lager/ cider Alcopop or can/bottle of regular lager Can or premium lager or strong beer Can of super strength lager Glass of wine (1.75 ml) Bottle of wine 1 small glass of sherry 1 single measure of aperitifs 1 single measure of spirits …and each of these is more than one unit Less than monthly Less than monthly Less than monthly Less than monthly Less than monthly Fig. 26.6.1.2 The AUDIT screening questionnaire. Scoring: 0—7 Lower risk, 8—15 Hazardous, 16—19 Harmful, 20+ Possible dependence. From Saunders JB, Aasland OG, Babor TF, de la Fuente JR, Grant M (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption-II. Addiction 88: 791−804.

SECTION 26 Psychiatric and drug-related disorders 6528 • clear advice to the patient to make a change in drinking • a menu of alternative strategies for making a change in behaviour • delivered in an empathic and nonjudgemental fashion • increase the patient's confidence in being able to change; self-efficacy Advice can be supported by self-help material and a follow-up ap- pointment to check on progress. Repeat GGT readings or other laboratory markers of alcohol consumption can be a powerful mo- tivator. All this can be accomplished in a 5–10 minute consultation. Specially

developed brief intervention packages are available. One such package is the SIPS (Alcohol Screening and Brief Intervention Pilots) Brief Advice Tool, available online (https://www.sips.iop.kcl.ac.uk). Only one or two sessions of didactic and experiential training are needed. Simple brief advice should be offered to patients who score be- tween 8 and 15 on the full AUDIT and those whom the practitioner suspects on other grounds of drinking in a hazardous fashion. It should also be offered as a minimum to patients who are thought to need more intensive intervention but who decline it. Ideally, the delivery of this brief advice should be immediately after a patient has been screened, otherwise an appointment should be offered as soon as possible thereafter. Extended brief intervention An extended brief intervention typically takes 20–30 minutes to deliver and can involve up to four additional sessions. It is often a condensed form of 'motivational interviewing' which aims to elicit, rather than impose, an increase in motivation to change behaviour. The level of training required to carry out this form of brief interven- tion effectively is substantially greater than that for simple advice, and should involve an emphasis on experiential learning. Again, further information, guidance, and training materials are avail- able from the SIPS website (SIPS Brief Lifestyle Counselling Tool). Clinical guidelines on brief interventions and training materials are also available from the Primary Healthcare European Project on Alcohol (http://www.phepa.net). Extended brief intervention should ideally be offered to individ- uals who are showing symptoms of physical or psychological harm due to their drinking (indicative AUDIT range 16–19). It may also be suitable for hazardous drinkers who are ambivalent about their drinking and wish to discuss it with a healthcare professional, or for those who have not responded to simple advice and want further assistance in reducing drinking to lower risk levels. Extended brief intervention is suitable for use by practitioners (medical, nursing, or others) with a special interest in alcohol-related problems. Electronic brief interventions Electronic screening and brief interventions, delivered via com- puter, the internet, and mobile phones, are another way of dealing with excessive drinking. Electronic interventions include some of the same features as face-to-face interventions (e.g. personalized feedback, engaging the participant in creating coping strategies, and goal-based plans) to motivate the participant to reduce their alcohol consumption over time. For some people the security, flexibility and anonymity of this approach is more acceptable than traditional (face-to-face) methods. For practitioners, they provide a means of avoiding the need to engage their patients in a discussion about alcohol and offer an acceptable and cost-effective alternative. Evidence on electronic brief interventions is encouraging, sug- gesting they can reduce weekly drinking by around three standard (UK) drinks per week. However given these effects are generally short term, electronic interventions may be most appropriate when used either as an adjunct to face-to-face advice delivered by practi- tioners, or for those who are unlikely to visit their doctor or nurse. Patients with possible dependence Patients who score 20 or above on the full AUDIT should be re- ferred to a specialist services for assessment of an alcohol depend- ence syndrome. Some recent research has reported promising findings on the effectiveness of extended brief interventions among patients with alcohol dependence identified in emergency depart- ments and general hospital wards who would otherwise be unlikely to receive any kind of help. There is a clear need to better integrate programmes to reduce excessive and dependent drinking into gen- eral medical care. Prognosis For lifestyle interventions, this is best thought of as the likely length of any intervention effect. Meta-analysis conducted as part of the 2018 Cochrane review of alcohol interventions in primary care found that brief intervention reduced the quantity of alcohol drunk by an average 20 g per week at one year following intervention compared to usual care. Other positive outcomes include a reduction in alcohol-related problems, healthcare utilization, and mortality outcomes. Most trials report 12-month outcomes, at which time effect sizes are small but

consistently positive. Positive effects have also been reported up to 48 months, but there is limited information on longer-term outcomes. More research on this is needed, including the role of booster sessions in maintaining or reinstating reductions in drinking. FURTHER READING Babor TF, et al. (2001). AUDIT: The alcohol use disorders identification test. Guidelines for use in primary care, 2nd edition. World Health Organization, Geneva. Kaner EFS, et al. (2017). Personalised digital interventions for redu- cing hazardous and harmful alcohol consumption in community- dwelling populations. Cochrane Database Syst Rev, (9), CD011479. Kaner EFS, et al. (2018). Effectiveness of brief alcohol interventions in primary care populations. Cochrane Database Syst Rev, (2), CD004148. National Institute for Health and Clinical Excellence (NICE) (2010). Alcohol use disorders: preventing the development of hazardous and harmful drinking. NICE Public Health Guidance [PH24]. NICE, London. http://www.nice.org.uk/guidance/PH24 O'Donnell A, et al. (2014). The impact of brief alcohol interventions in primary healthcare: A systematic review of reviews. Alcohol Alcohol, 49, 66–78. Rollnick S, Miller W, Butler C (2008). Motivational interviewing in health care: Helping patients change. Guilford Press, New York.

26.6.2 Obesity and weight management 6529 Susan Je

26.6.2 Obesity and weight management 6529 Susan Jebb and Paul Aveyard

26.6.2 Obesity and weight management 6529 26.6.2 Obesity and weight management Susan Jebb and Paul Aveyard ESSENTIALS Obesity is a major public health issue. It is common and a strong risk factor for many medical conditions, including Type 2 diabetes mellitus, heart disease, and cancer. Obesity results from an energy intake that exceeds energy expenditure. Cheap, readily available, energy-dense food and sugary drinks together with a sedentary lifestyle are fuelling the rise in obesity. There is growing evidence that interventions to aid weight loss are effective in reducing the risk to health associated with being obese, especially if they combine change in both diet and phys- ical activity. There is only a limited role for drug treatment of obesity in routine care. For individuals at the highest risk of comorbid condi- tions, bariatric surgery is an appropriate option. Introduction Obesity is a major risk factor for cardiovascular disease, type 2 dia- betes, and some cancers. Its causes are complex, but there is much that general physicians can do to help patients to lose weight before considering referring them to specialist obesity services. Here we concentrate on the role of the medical practitioner in management of obesity in nonspecialist medical contexts. What is obesity? Weight status is usually calculated using the body mass index (BMI; weight [kg]/height2 [m]). The health consequences of obesity are specifically related to excess body fat, hence BMI can be a misleading measure of risk for some individuals with well-developed muscu- lature. Specialist tools are available to measure body composition, including dual energy X-ray absorptiometery and bioelectrical im- pedance analysis, but clinical judgement can usually identify those whose excess weight reflects excess muscle mass rather than fat. At a population level, the risk of adverse health consequences increases progressively with increasing BMI in an almost linear manner from a BMI of more than 22 kg/m2. The standard defin- ition of overweight is a BMI greater than 25 kg/m2 and obesity over 30 kg/m2. The cardiometabolic complications of obesity are particularly as- sociated with the degree of visceral adiposity. This can only be accur- ately measured using magnetic resonance or computed tomography imaging techniques, but measurements of waist circumference are a useful proxy and can be especially helpful to identify

people who are only moderately overweight (BMI 25–30 kg/m2) but at increased risk (Fig. 26.6.2.1). Once initiated, the progress of a weight management programme is most easily monitored by weight loss. Assuming protein intake is adequate, there is no evidence that specific dietary regimens alter the proportion of weight lost as fat or influence the site of fat loss. Physical activity can help attenuate losses of lean tissue and, if of sufficient duration and intensity, may increase the loss of fat from visceral fat deposits. Aetiology Obesity is caused by an excess energy intake relative to energy needs over a prolonged period. At a population level, an environ- ment in which food and drink are readily available in large por- tions at low cost fuels obesity. This availability of food is combined with social and cultural trends that reduce the energy costs of daily life; these include a reduction in manual labour, energy saving gadgets in the home, a rise in car ownership, and an increase in Men: <94 cm Women: <80 cm Men: 94–102 cm Women: 80–88 cm Men: >102 cm Women: >88 cm No increased risk No increased risk No increased risk Increased risk Increased risk Increased risk Increased risk Very high risk Very high risk Very high risk Very high risk High risk High risk BMI Underweight (Not applicable) Underweight (Not applicable) Underweight (Not applicable) Healthy weight (18.5–24.9 kg/m2) Overweight (25–29.9 kg/m2) Obese (3034.9 kg/m2) Very obese (>40 kg/m2) Underweight (<18.5 kg/m2) Low High Very high Fig. 26.6.2.1 Identifying patients at increased risk of medical morbidity from obesity (NICE). Source data from Obesity: identification, assessment and management, NICE Guidelines, November 2014.

SECTION 26 Psychiatric and drug-related disorders 6530 the time spent in front of screens. Each kg of excess tissue contains approximately 7500 kcals, which provides a useful reminder of the likely rate of weight loss with dieting; a 500 kcal/d deficit produces a weight loss of around 0.5 kg per week. However, the basic law of thermodynamics is not especially helpful in understanding the causes of obesity for an individual patient as a precise measure of energy input and output is hard to achieve. Easier to measure are markers of high energy intake such as high consumption of sugary drinks or alcohol, regular takeaway foods and large portion sizes on the one hand, and markers of low output such as a sedentary occupation, a high level of leisure screen time, or use of a car for short journeys. There is a strong heritable component to obesity. Genetic effects may be manifest through differences in appetite control and energy intake. Some endocrine disorders also increase the likelihood of obesity. The Scottish Clinical Guidelines for obesity note that some drugs can have marked effects on body weight, with increases of a few kilograms over 12 weeks, including: • atypical antipsychotics, including clozapine • β-adrenergic blockers, particularly propranolol • insulin, when used in the treatment of type 2 diabetes mellitus • lithium • sodium valproate • sulphonylureas, including chlorpropamide, glibenclamide, glimepiride, and glipizide • thiazolidinediones, including pioglitazone • tricyclic antidepressants, including amitriptyline For fuller discussion of the aetiology of obesity, see Chapter 11.6. Health consequences of obesity Obesity places a mechanical strain on the body, increasing the risk of musculoskeletal problems and the need for knee and hip replace- ments. It also exerts metabolic effects on almost every organ system of the body. It is the principal nongenetic risk factor for the development of insulin resistance, with a roughly linear increase in risk of type 2 diabetes from a BMI of 22 kg/m2 upwards (Fig. 26.6.2.2). For women, a BMI of 30 kg/m2 confers a 40-fold risk of developing diabetes relative to a BMI of 22 kg/m2. A person who enters adulthood with a BMI of 30 has a lifetime probability of developing diabetes of over 70%. The increased risk of premature death associated with obesity is mainly due to its presumed causal connection to cardiovascular dis- ease. There is a linear association between BMI (as a proxy for body fat) and mortality from both ischaemic heart disease and stroke. This association appears to be explained by the curvilinear associ- ation between raised

body fat and higher low-density lipoprotein (LDL) and lower high-density lipoprotein (HDL), and the linear as- sociation between body fat and blood pressure (Fig. 26.6.2.3). Obesity increases the risk of most nonsmoking related cancers through mechanisms primarily relating to the products of adipose tissue, including raised levels of oestrogen, insulin-like growth fac tors, and inflammatory cytokines. Collectively, the increased incidence of cardiovascular dis- ease, diabetes and cancer reduce life expectancy by three years for someone with a BMI of 30–35 kg/m2 and by 10 years for someone with a BMI of 40–45 kg/m2. Obesity is also associated with an in- creased risk of needing social care in older age. This implies that it is associated with a longer period of ill health prior to death, and this is one of the costs of obesity to the economy. 100 90 80 70 60 50 40 30 20 10 22.0–22.9 BMI category (kg/m) Age-adjusted relative risk of diabetes 23.0–23.9 24.0–24.9 25.0–26.9 27.0–28.9 29.0–30.9 31.0–32.9 33.0–34.9 ≥35.0 0 Fig. 26.6.2.2 Body mass index (BMI) and risk of diabetes in women. Data from Colditz et al. 1995. Ann Intern Med, 122(7): 481–6.

26.6.2 Obesity and weight management 6531 Epidemiology Worldwide, obesity has almost doubled since 1980 and today an esti- mated 600 million people are obese. Although it is more prevalent in high-income nations, the rapid rate of increase in low and middle- income countries is putting a particular strain on their healthcare resources. In the United Kingdom over a quarter of adults are obese (defined as a BMI >30 kg/m2), and this proportion is even greater in certain groups. For example, it is higher among women of black Caribbean, black African, and Pakistani ethnicities, compared to the other ethnic groups, and is more common in those of low socioeconomic status. These differences underpin some of the in- equalities in life expectancy and disease patterns. Treatment Behavioural weight management programmes Most overweight people who present to general medical services do not receive any support to reduce weight. The reasons for this in- clude sensitivities in raising the issue, patchy provision of services, and lack of confidence in the effectiveness of interventions. Clinical guidelines in most countries identify a series of steps in an obesity care pathway (Fig. 26.6.2.4, recognizing that these dif- ferent steps need to operate as a coherent whole. There is emerging evidence that a simple prompt by a doctor can stimulate effective self-management of obesity. A systematic review of self-help interventions found that many are effective, at least in the short term. Signposting patients to the 12-week online behavioural weight loss programme offered by NHS Choices represents a minimal cost option. Most behavioural programmes are based on dietary change. The most effective, especially in the medium to long term (more than one year), are those that also incorporate support for increased physical activity. There is little evidence to suggest that diets with a specific macronutrient composition (e.g. low fat, low carbohydrate, or high protein), are associated with greater long-term weight loss. Early differences in weight loss relate to differences in adherence, suggesting that diet should be tailored to personal preferences and circumstances. There is no evidence that exercise-only programmes are effective for weight loss. A review of weight loss interventions specifically suitable for use in a general medical context found that support provided by a non- specialist healthcare professional was ineffective. However, for people seeking help to lose weight, referral to a community-based open-group weight loss programme, such as WeightWatchers or Slimming World, led to a mean weight loss of approximately 2.5 kg at one year. The largest study to directly compare these two ap- proaches found weight losses of -1.77 kg and -4.06 kg, respectively, in those referred to a practice nurse or a commercial provider (Fig. 26.6.2.5). Many areas of the United Kingdom now offer referral programmes funded by the NHS. Patients welcome the greater frequency of con- tact with a community group and perceive these groups as more motivating than the information-based approach usually offered in primary care. A recent trial has shown that a

brief intervention by a health professional offering referral to these weight loss services leads to significantly greater weight loss at one year than advice only. This represents a cost-effective first-line option for people who are overweight or obese and, if offered routinely, could reduce the population prevalence of obesity and comorbid conditions. Very low energy diets There is evidence that very low energy diets, providing less than 800 kcals/d, in combination with a behavioural programme achieve 160 5 4 3 2 1 0 140 120 100 80 15 25 35 50 15 25 35 50 Diastolic Systolic Blood pressure Baseline BMI (kg/m2) Adjusted for age, smoking, and study Cholesterol Blood pressure, cholesterol and BMI F F F F F M M M M Non-HDL-C Ratio of means (non-HDL-C/HDL-C) HDL-C M mm Hg mmol/litre (or ratio) Fig. 26.6.2.3 Relationship between BMI and blood pressure or cholesterol. Reprinted with permission from Elsevier (The Lancet, 2009; 373: 1083−96).

SECTION 26 Psychiatric and drug-related disorders 6532 more than 4 kg greater weight loss at one year than a behavioural programme alone. At present, the National Institute for Health and Care Excellence (NICE) recommends these only for patients who would benefit from acute weight loss, for example, ahead of knee surgery or fertility treatment, because of concerns that they may be associated with later rapid weight gain. However, there is no good evidence that this concern is justified, and recent trials show they are safe, acceptable and effective in routine care. Cognitive behaviour therapy Specialist medical weight management services will sometimes include interventions using cognitive behavioural therapy, but there are few high quality trials of this approach and there is little evidence of effectiveness. In a subgroup of obese people identified as having binge eating disorder, cognitive behavioural therapy can reduce the symptoms of binge eating, but is ineffective for weight loss. Drug treatments for obesity There has been limited success in developing drugs to treat obesity and no centrally acting compounds are licensed for the treatment of obesity in the United Kingdom. Orlistat, a gastrointestinal lipase inhibitor, reduces the absorption of dietary fat by approximately 30%. It is essential that patients using this follow a low fat diet in order to avoid adverse gastrointestinal side effects (steatorrhoea), and this dietary change is likely to account for as much as 50% of the observed weight loss. Patients who fail to make dietary changes will usually experience adverse events, leading to poor medication adherence and minimal weight loss. Others can be successfully maintained on orlistat for periods of one year or more with clin- ically significant weight loss. In a trial over four years, people with impaired glucose tolerance randomized to receive orlistat plus be- havioural support lost 6 kg compared to a group receiving similar behavioural support plus placebo treatment, who lost only 3 kg. This greater weight loss was associated with a 37% reduction in the incidence of diabetes. Orlistat is also available from pharmacists in a reduced (half) dose with proportionally lower rates of weight loss, but substantially fewer adverse effects. For patients with impaired glucose tolerance, metformin can be prescribed. Indirect comparisons suggest that the reduction in weight appears smaller than with orlistat but the reduction in the incidence of diabetes is comparable. New injectables used in patients with diabetes, such as liraglutide, are also associated with significant weight loss but are not appropriate for routine treatment of obesity. Surgery NICE recommends that patients who have a BMI greater than 35 kg/m2 with obesity-related comorbidities, or those who are severely obese Specialiist MDT services for severe & complex obesity, including bariatric surgery Primary care specialist services, including pharmacotherapy and referral to dietitian Community/primary care behavioural weight management services Primary prevention e.g. workplace interventions, active travel, food skill training, mass media information and advice Fig. 26.6.2.4 Outline obesity care pathway. 88 –1.59 kg –4.03 kg P < 0.001 86 84 82 80 78 Baseline 2 4 6 9 12 Treatment duration (months) Body weight (kg) weight Watchers Standard

care Fig. 26.6.2.5 Treating obesity in primary care: practice nurse vs. referral to commercial provider (n = 772). Jebb et al. 2011. Lancet, 378, 9801: 1485–1492.

26.6.3 Smoking cessation 6533 Paul Aveyard

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26.6.3 Smoking cessation 6533 with a BMI greater than 40 kg/m2, may be referred for specialist review and considered for bariatric services. Several different surgical techniques are available, with losses ranging from 10 to 15 kg for gastric bands to over 20 kg for gastric bypass with correspondingly greater improvements in health. Long-term follow-up of matched populations shows significant reductions in the inci- dence of diabetes, myocardial infarction, and stroke, and in overall mortality rates. Prognosis Given the linear associations between adiposity and risk of morbidity and mortality, weight loss should proportionally reduce risk of future ill health. However, there is much less data on the associ- ation between weight loss and long-term health outcomes than there is on the association of excess weight and health risk. A systematic review of trials examining the association between change in weight and change in blood pressure reported that each kilogram lost reduced systolic blood pressure by 1 mm of mer- cury, although a systematic review and meta-analysis of studies with a follow-up of longer than 12 months found a smaller benefit. Similarly, a systematic review and meta-analysis of studies on the association between weight loss and change in lipids confirmed the linear association we might expect between reducing weight and re- ductions in triglycerides, LDL, and total cholesterol and increases in HDL cholesterol. In patients with type 2 diabetes, weight loss of about 5 kg is associated with a reduction in fasting blood glucose of about 0.2 mmol/litre at 12 months. The strongest evidence for a causal association between losing weight and improved health comes from clinical trials. Systematic reviews of these show that relatively brief weight loss programmes reduce the incidence of diabetes by half in the following few years, despite some weight regain. Two trials with long-term follow-up found that the benefit of the weight loss programme persisted to at least 10 years, even if the weight lost was later regained. Other studies show weight loss induced symptomatic improvements in clinical conditions such as sleep apnoea, atrial fibrillation, and non-alcoholic fatty liver disease. While weight regain is common after all interventions, there are health benefits from even short periods of reduced weight. Moreover, with each weight loss attempt, a proportion of people will succeed in making long-term changes to their eating and activity, a situation analogous to interventions for smoking cessation. Conclusions There is growing evidence that a range of interventions offered to patients by medical practitioners can achieve at least short-term weight loss and clinical benefits. While bariatric surgery may be the most effective

intervention for individuals with very high BMI and at significant risk of comorbidities, there is a less costly, but pressing need to provide access as part of routine medical care to effective weight management services for the large proportion of the population who are obese. Treating obesity is a cost-effective intervention to reduce the burden of a host of comorbid conditions at a population level. FURTHER READING Aveyard P, et al. (2016). Screening and brief intervention for obesity in primary care: a parallel, two-arm, randomised trial. Lancet, 388, 2492–500. Dietz WH, et al. (2015). Management of obesity: improvement of health-care training and systems for prevention and care. Lancet, 385, 2521–33. Jensen MD, et al. (2014). AHA/ACC/TOS guideline for the management of overweight and obesity in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society. J Am Coll Cardiol, 63, 2985–3023. Royal College of Physicians (2015). Action on obesity: comprehensive care for all. https://www.rcplondon.ac.uk/sites/default/files/action- on-obesity.pdf Wormser D, et al. (2011). Separate and combined associations of body- mass index and abdominal adiposity with cardiovascular disease: col- laborative analysis of 58 prospective studies. Lancet, 377, 1085–95. 26.6.3 Smoking cessation Paul Aveyard ESSENTIALS Smoking is harmful to health. The main harms are cardiovascular dis- ease, lung cancer, and chronic obstructive pulmonary disease. Most people who smoke start in their teens, and some become addicted. Stopping smoking may be prompted by public policy or price rises, and while physicians have a role in lobbying for these, the main op- portunity a physician has to help their patients stop smoking is during the medical consultation. Advising the patient to stop has some effect, but is more likely to be effective when combined with practical help, the best form of which is regular face-to-face meetings to support the patient combined with drugs that reduce craving. Helping a patient to stop smoking greatly reduces their risk of illness and early death. Introduction Tobacco smoking is the world’s leading cause of drug-related harm. The rise and fall of smoking in a population can been seen as occurring in four stages: in stage one the rate of smoking is low and confined to men, with correspondingly low morbidity and mortality. In the second stage, the rate rises rapidly among men and starts among women. By the third stage, the rate rises rapidly in women and morbidity and mortality become evident. In the fourth stage, there is a legacy of tobacco-related harm, which drives tobacco con- trol, which reduces the rate of smoking. Countries like the United Kingdom are in the fourth of these stages, with rates of smoking now falling rapidly; in 2016, only 17% of adults and 3% of young people smoke. However, smoking remains a major public health problem. Most patients and all doctors know that smoking is harmful and that stopping smoking is a good thing. This chapter reviews evidence for

 benefits of stopping smoking and outlines how doctors can inter- vene most effectively to help their patients to do this. Smoking behaviour Initiation of smoking Most people start smoking in adolescence. This observation is often ascribed to peer pressure, and there is strong evidence that a person is more likely to smoke if they are part of a social network in which others smoke. It is doubtful that the influence is directly due to pres- sure from a proselytizing minority of smokers systematically re- cruiting into its ranks; indeed, there is evidence that pressure works the other way, with young people who start smoking being pres- surized to desist by their nonsmoking peers. Nevertheless, there is clear evidence that smoking starts as an act of social affiliation with a strong social meaning in adolescence. Tobacco addiction In many countries, most people have tried smoking cigarettes but only a few people persist. There is strong evidence from twin and adoption studies that what determines who continues to smoke is explained gen- etically, as with other drugs of addiction. Furthermore, the

propensity to successfully stop smoking also appears to be explained genetically. Although candidate genes are associated with smoking persistence, their individual effects are weak, implying that complex polygenetic mechanisms are responsible for this unfortunate inheritance. Smoking is largely maintained by addiction. Most people who smoke and live in countries where smoking is stigmatized show signs of dependence. Nicotine is the principal vehicle of addiction to cigarettes, though nicotine is not particularly liable to cause de- pendence without being associated with other aspects of smoking behaviour. These may be regarded as secondary reinforcers and in- clude the ‘catch’ of smoke in the throat. This may be why few people become addicted to nicotine without having smoked cigarettes. The volatile components of cigarette smoke carry the nicotine into the lungs where it is absorbed in the alveoli and rapidly transported to the brain. Here it binds to acetylcholine receptors in the ventral tegmental area. These neurons project to the nucleus accumbens where they lead to dopamine release in the core and shell, inducing pleasure and habit-related learning. Regular smoking leads to neuroadaptation of this pathway, which helps maintain the behav- iour. Nicotine is rapidly metabolized by the liver to nonpsychoactive compounds. Consequently, regular smokers come to experience a nicotine hunger when they have not smoked for a while, creating a drive to smoke. In addition, nicotine withdrawal induces a mild to moderate aversive state of negative affect and irritability. The culmination of these mechanisms is that people who smoke typically experience unwilled impulses to smoke in situations where they characteristically smoked in the past. When a person decides to stop smoking, these impulses are experienced as cravings. The strength and frequency of cravings decreases over about six weeks, but this period varies greatly. The aim of smoking cessation treat- ment is to drive down the strength of urges to smoke and to support people’s commitment and ability to resist them. The learnt response to cues that give rise to the urge to smoke are unlearnt as long as smoking is not reinstated. Maintaining abstinence then becomes easier. Consequently, the critical period in which smokers need sup- port not to return to smoking is the first few months of abstinence. Risks of continued smoking and benefits of cessation Smoking remains a highly dangerous behaviour. A lifetime of smoking reduces average life expectancy by 10 years. People who smoke have approximately double the risk of death at any given age and there is a dose-response relationship with amount smoked. Smoking causes this excess morbidity and mortality by three main routes. These are, in order of importance, cardiovascular disease (CVD) (principally ischaemic heart disease and stroke), lung cancer, and chronic obstructive pulmonary disease (COPD). • The risk of CVD is increased three fold in smokers during middle age. Importantly, for the risk of CVD, light smoking is almost as hazardous as heavy smoking. Cessation quickly reduces this risk; it is halved in the first year and falls to that of a lifelong nonsmoker after 10 years. • The risk of lung cancer has a very steep dose-response relationship with amount smoked; it increases risk 20-fold in heavy smokers. Stopping smoking at any age reduces the risk of developing lung cancer. • People who smoke are three to five times more likely to suffer from COPD. As many as 30% of lifelong smokers will develop COPD. Stopping smoking reverts the rate of decline of lung func- tion to that of nonsmokers and is the only treatment known to achieve this. The net effect of both the cumulative damage from smoking and the remarkable benefits of cessation mean that we can say that for every day a person smokes after the age of 35 years that person will lose six hours of life. This evidence underlines the imperative of stopping smoking before middle age and how important it is for physicians to help their patients to do this (Table 26.6.3.1). Helping people to stop smoking Public health interventions for smoking cessation The main reason people stop smoking is concern about the effect on their health, though in many countries the price of cigarettes is also a factor. Public policy measures can support cessation by influencing the acceptability, affordability, and

availability of cigar- ettes, and many countries have enacted tobacco control legislation
Table 26.6.3.1 Years of life gained from stopping smoking at various ages relative to people who continue smoking throughout life in the British Doctors Study Age when stopping smoking Years of life gained 25–34 years 10 35–44 years 9 45–54 years 6 55–64 years 3

26.6.3 Smoking cessation 6535 and policies. These measures are described in the world's first public health policy document, the World Health Organization (WHO)'s Framework Convention on Tobacco Control. • While measures such as banning smoking in public places are mainly intended to protect nonsmokers from harm, they also reduce the perceived acceptability of smoking indoors at home and in general. • Specific tobacco taxes are levied in almost all countries, with many committed to above inflation price increases. Increasing price is probably the single most effective prompt for cessation and is par- ticularly motivating when the price increases create 'left digit ef- fects' (e.g. from £6.xx to £7.xx for a pack of cigarettes). • Warnings on packets, particularly graphic warnings, and the removal of branding logos from cigarette packs affect people's perceptions of the acceptability of smoking and lead to some people stopping. Governments do not automatically adopt these policies. They come about only because physicians and others lobby for them, hence physicians have a key role in advocacy in this area. Physician-delivered interventions for smoking cessation Physicians have a directly therapeutic role in supporting their pa- tients' efforts to quit smoking. The first and most direct way of doing this is to advise patients to stop smoking because of the adverse effects on their health. Giving this advice has been the cornerstone of guide- lines on helping people stop, because there is clear evidence from a meta-analysis of trials that it is effective in promoting attempts to quit smoking. However, the same meta-analysis also found that not only advising but also offering help to stop smoking was even more effective. It is therefore best for physicians to offer advice about the harm resulting from smoking and to offer the patient help to stop. The help should include both psychological support and drug therapy. These are effective both alone and together in improving the chance of successful cessation. Without help, half of all quit attempts fail within a week and only about 5% of attempts are successful at six months. Psychological support Psychological support helps achieve smoking cessation by keeping people committed to the goal that they have set themselves. It can also help patients to use strategies to make cessation easier, such as removing or avoiding the cues that prompt them to smoke. Self- help resources, such as booklets, are only modestly more effective than no support. More intensive support provided without direct personal contact, such as by automated text messages or via online self-help programmes, is also only modestly effective. Many coun- tries provide quitlines and trials suggest that access to a quitline also modestly boosts success. However, probably the most effective ways of providing psychological support for stopping is by regular sched- uled face-to-face meetings, either individually or in groups. Drugs to aid smoking cessation The effectiveness of drugs in helping patients achieve cessation relates directly to the degree to which they suppress the urge to smoke. Three drugs are in widespread use: bupropion, nicotine replacement therapy (NRT), and varenicline. A network meta- analysis of randomized controlled trials shows that the two most effective pharmacotherapies are varenicline and combination NRT. Combination NRT means using two forms of NRT together, usually a nicotine patch for long-term suppression of urges, together with a short-acting form of NRT that suppresses the urge to smoke when administered acutely. The use of these drugs doubles the chance of successful cessation. While all medications have adverse effects, those of smoking ces- sation medication must be compared with the adverse effects of con- tinued smoking. The main adverse effects are as follows: • Bupropion causes fits in one in 1000 users, which is the most ser- ious

adverse event. Around 1 in 10 users cease treatment due to adverse events, principally insomnia, headache, dry mouth, and gastrointestinal upset. • Nicotine replacement causes irritation at the site of administra- tion (i.e. skin or mouth irritation). • Varenicline has been associated with psychological disturbance in case reports but not in controlled studies. It commonly causes nausea and insomnia. Discontinuation due to adverse events oc- curs in around 1 in 20 users. Electronic cigarettes Electronic cigarettes have become popular in recent years. The few trials so far published suggest that they function as well as conven- tional NRT. Undoubtedly the rapid increase in popularity of this ap- proach is likely to lead to product development, which may increase the appeal still further and increase the efficacy of these and other al- ternative nicotine delivery devices. While we clearly lack long-term epidemiological data on their continued use, analyses of the vapour produced suggests there are no particular reasons to be concerned about the health risks for smokers switching to electronic cigarettes. Conclusions Many people who smoke try and fail to stop smoking. However, most will succeed in the end, and the sooner they do so the greater the chance of avoiding the harms that result from smoking. Repeated attempts to help them with advice, ongoing face-to-face support, and effective pharma- cotherapy offer the best opportunities to help them stop and avoid the harm to their health that would result from continuing to smoke. FURTHER READING Mechanisms of addiction to tobacco West R, Brown J (2013). Theory of addiction, 2nd edition. Addiction Press, Wiley Blackwell, London. Assisting cessation Aveyard P, Raw M (2012). Improving smoking cessation at the indi- vidual level. Tobacco Control, 21, 252–7. Aveyard P, et al. (2012). Brief opportunistic smoking cessation inter- ventions: a systematic review and meta-analysis to compare advice to quit and offer of assistance. Addiction, 107, 1066–73. Hartmann-Boyce J, Aveyard P (2016). Therapeutics: pharmacotherapy for smoking cessation. BMJ, 352, i571. Harms from smoking and benefits of smoking cessation Pirie K, et al. (2013). The 21st century hazards of smoking and benefits of stopping: a prospective study of one million women in the UK. Lancet, 381, 133–41.

Paul Aveyard 26.7 Psychiatry, liaison psychiatry,

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ESSENTIALS Psychiatry first developed as a separate medical specialty about 150 years ago when physicians were recruited to staff the new lunatic asylums. It later embraced psychotherapy and more recently has adopted com- munity rather than hospital-based working. The fact that psychiatry re- mains largely separate from other areas of medicine, together with the increasing focus on technical procedures in medicine, has led to some- times inadequate psychiatric care for medical patients. Measures to ad- dress this shortcoming began 50 years ago with the ad hoc development of liaison psychiatry teams, providing in-reach psychiatric services from mental hospitals to general hospitals. A more recent innovation is to re- integrate psychiatrists into medical teams as specialists in psychological medicine to provide joined up medical and psychiatric care. What is psychiatry? Psychiatry is the branch of medicine that specializes in the diagnosis and treatment of those illnesses traditionally considered to be ‘mental’ in nature. While there has been a long history of medical interest in mental illnesses, psychiatry as a defined medical specialty had its ori- gins only about 150 years ago. Modern psychiatry is a combination of two main historical strands. The first was a consequence of the setting up of lunatic asylums from the early 1800s onwards; physicians were recruited to work in these new institutions built to serve

the severely mentally ill and came to be regarded as specialists in what was called ‘alienism’. This institution-based care of the seriously mentally ill was revolutionized in the 20th century by the discovery of effective drugs for psychosis and depression; innovations that allowed increased community care and changed how psychiatrists worked. The second strand arose from the development of psychotherapy or talking treat- ments. Physicians have long used talking to their patients as a form of treatment. However, in the early 20th century Freud, a neurologist, and others developed more intensive forms of talking therapy called psychoanalysis. Psychoanalysis become influential in the United States in the first half of the 20th century, but less so in the United Kingdom. Psychiatrists and psychologists have since developed many new forms of talking therapy such as cognitive behaviour therapy, which have proven to be effective for several conditions such as depression and have become a major form of treatment in psychiatry. The establishment of psychiatry as a separate medical specialty was formalized in the United Kingdom in 1971 by the creation of the Royal College of Psychiatrists. Modern psychiatrists typically work in multidisciplinary teams and usually in community settings. The other professional groups making up the multidisciplinary team include: • Psychologists—nonmedically trained psychology graduates who have received clinical training (often as a ‘taught doctorate’). • Psychiatric nurses (often working as community psychiatric nurses, ‘CPNs’) who have training in mental illness, but often have little or no training in general nursing. • Members of other disciplines such as occupational therapists, social workers, and generic ‘mental health workers’ who have vari- able amounts of training. Psychiatry and the medically ill Before the rise of modern technological medicine, most physicians had to rely on listening and talking with the ill person, observing their behaviour, and using the doctor–patient relationship as a therapeutic tool. In the early 20th century, a small number of phys- icians in teaching hospitals actively specialized in the psychological aspects of their patients’ medical illnesses. This area of work called ‘psychological medicine’ did not survive in the United Kingdom as a specialty for physicians. In Germany, driven in part by a much stronger emphasis on psychoanalysis, a subspecialty of medicine called psychosomatic medicine, which is separate from psychiatry, has survived and prospered to this day. The formal development of a subspecialty of psychiatry that fo- cuses specifically on the medically ill is relatively recent. It had its beginning in the United States in the 1950s and has gradually devel- oped in the United Kingdom from the 1970s onwards. It originally went by the name of liaison psychiatry, but is increasingly adopting the old term of ‘psychological medicine’. What is liaison psychiatry? Psychiatric and medical services have remained organisationally separate in the United Kingdom since the setting up of the asy- lums. This division was maintained with the establishment of sep- arate mental health trusts in the UK in the 1990s. Consequently, 26.7 Psychiatry, liaison psychiatry, and psychological medicine Michael Sharpe

 psychiatric services to the medically ill were conceived of as an out- reach from mental health services into general hospitals, hence the term ‘liaison’ which refers to the linking of distinct services. What do liaison psychiatrists do? Medicine, despite the huge success in identifying and treating dis- ease processes, often finds itself ill equipped to deal with patients’ other needs. For example: • Patients who have self-harmed form a significant proportion of those presenting to general hospital emergency departments • A quarter of patients seen by specialist medical services have anxiety or depression • As many as half of acute medical inpatients suffer from delirium or dementia • A third of medical outpatients suffer from somatic symptoms inadequately explained by disease (medically unexplained symptoms) To complicate matters further, these conditions—which are typic- ally deemed psychiatric rather than

medical—are often inextricably interwoven with medical conditions. This phenomenon is called multimorbidity and necessitates that the patient receives joined up medical and psychiatric care. Common presentations referred to liaison psychiatry teams, the diagnoses they commonly make, and the interventions they use, are shown in Table 26.7.1.1. How do standard liaison psychiatry services work? Most liaison psychiatry services work by responding to referrals from physicians, although some screen medical patients to pro- actively identify psychiatric problems such as depression or al- cohol misuse. Liaison psychiatry teams are usually employed by a mental health provider, but have their accommodation in or near the general hospital. The composition of the liaison psychiatry team varies, but usually includes one or more consultants in liaison psychiatry, trainee psychiatrists, and mental health specialist nurses. Psychologists also commonly work in general hospitals, often as clinical or health psychologists, and they often work separately from the liaison psychiatry services. How to refer a patient to a liaison psychiatrist The ease of access to skilled help from a psychiatrist varies consider- ably between hospitals, and seeking it can sometimes be frustrating. Hospitals that have a dedicated liaison psychiatry service should ideally provide easy 24-hour access. Elsewhere a referral may need to be made to a general psychiatrist working in the community or in a psychiatric hospital. The initial response to a routine referral may be from a nurse or psychiatric trainee; if a consultant opinion is re- quired, this should be specifically requested. Before making a referral, it is useful for the physician to consider the following questions: • What exactly is the problem you need help with? • What is the differential psychiatric diagnosis? • What type of help are you requesting, and how quickly do you need it? It is important to be aware that, just as many physicians are not con- fident in psychiatric care, many general psychiatrists are not confi- dent in managing medical conditions and may need clear guidance on this aspect of the patient’s care. In addition, it is also important to remember that specialist psychiatric beds are commonly in very short supply and largely occupied by patients with severe psychotic illnesses. Consequently, an apparent lack of willingness to ‘take the patient away’ is more likely to be a reflection of this limitation in resource than of unhelpfulness by the psychiatrist. Psychological medicine There is a recent trend toward increasing the integration of psychi- atrists into medical services. This is happening for several reasons: • It is becoming clear that people using medical services very often have a mental illness that merits treatment in its own right and which complicates their medical care. This is especially the case with the increasing number of elderly patients and is an important aspect of the challenge of multimorbidity. • Patients and policymakers are increasingly demanding more effi- cient and more integrated care, with ‘parity of esteem’ for mental and physical illness driving policies that require more attention is paid to mental illness, including in the medically ill. • Research in neuroscience is increasingly raising questions about the fundamental rationale for distinguishing some illnesses as ‘mental’ and some as ‘physical’, when mental illness has functional and sometimes structural correlates in the brain. A recent innovation is to fully reintegrate psychiatry into the general hospital by employing psychiatrists (and psychologists) as members of medical teams. The advantages of this way of working are that psychiat- rists are more accessible to staff and to patients, have a much greater op- portunity to support and educate their medical and nursing colleagues in the management of psychiatric disorder, and use the same protocols and medical records. The result is that the patients experience seamless care. This model currently operates successfully at the John Radcliffe Hospital in Oxford. As it is not a liaison service (which means a link between two services), but is fully integrated into medicine, it is called an integrated psychological medicine service. The trend towards hope- fully integrating mental and physical care is likely to gather pace and will bring psychiatry and medicine back together, to the benefit of both. Table 26.7.1.1 What do liaison

psychiatrists do? Assess and manage presentations such as Make psychiatric diagnoses such as Provide interventions that may include Anxiety Confusion Delusions and hallucinations Disturbed behaviour Low mood Medically unexplained symptoms Nonadherence to medical treatment Self-harm and suicide risk Adjustment disorder Anxiety disorders Bipolar disorder Delirium Dementia Depressive disorder Personality disorder Schizophrenia Somatic symptom (somatization) disorder Collaborate with and support medical and nursing staff Provide education Do complex capacity and Mental Health Act assessments Facilitate discharge from hospital Link with community mental health services Give psychological treatments Recommend psychotropic drugs

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SECTION 27 Forensic medicine Section editor: John D. Firth 27.1 Forensic and legal medicine 6541 Jason Payne-James, Paul Marks, Ralph Bouhaidar,
and Steven B. Karch