

# 18 - 13

# Psychosomatic Medicine

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# 01 - 13.1 Introduction and Overview

## 13.1 Introduction and Overview

Psychosomatic Medicine 13.1 Introduction and Overview Psychosomatic medicine has been a specific area of concern within the field of psychiatry for more than 50 years. The term psychosomatic is derived from the Greek words psyche (soul) and soma (body). The term literally refers to how the mind affects the body. Unfortunately, it has come to be used, at least by the lay public, to describe an individual with medical complaints that have no physical cause and are “all in your head.” In part due to this misconceptualization, the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (DSM), in 1980, deleted the nosological term psychophysiological (or psychosomatic) disorders and replaced it with psychological factors affecting physical conditions (see Section 13.5), nor has the term reappeared in subsequent editions, including the latest edition (DSM-5). Nonetheless, the term continues to be used by researchers and is in the title of major journals in the field (e.g., Psychosomatic Medicine, Psychosomatics, and Journal of Psychosomatic Research). It is also used by the two major national organizations in the field (the Academy of Psychosomatic Medicine and the American Psychosomatic Society) as well as international organizations (e.g., the European Association for Consultation Liaison Psychiatry and Psychosomatics). In 2003 the American Board of Medical Specialties and the American Board of Psychiatry and Neurology approved the specialty of psychosomatic medicine. That decision recognized the importance of the field and also brought the term psychosomatic back into common use.

**HISTORY** As Edward Shorter discusses in detail in his summary of the history of psychosomatic illness, ways of presenting illness vary over history, because patients unconsciously select symptoms that are thought to represent true somatic illnesses. As a result, psychosomatic presentations have varied over the course of recent history. Prior to 1800, physicians did not conduct clinical evaluations and could not distinguish somatic from psychogenic illness. As a result, the diagnoses of hysteria and hypochondriasis could easily be made in the presence of true medical illnesses and did not suggest any specific disease presentations. Sigmund Freud was the principal theoretician to bring psyche and soma together. He demonstrated the importance of the emotions in producing mental disturbances and somatic disorders. His early psychoanalytic formulations detailed the role of psychic determinism in somatic conversion reactions. Using Freud’s insight, a number of

workers in the early decades of the 20th century tried to expand the understanding of the interrelationship of psyche and soma. The influence on adult organ tissue of various unresolved pregenital impulses was proposed by Karl Abraham in 1927, the application of the idea of conversion reaction to organs under the control of the autonomic nervous systems was described by Sándor Ferenczi in 1926, and the attaching of a symbolic meaning to fever and hemorrhage was suggested by Georg Groddeck in 1929. In the 20th century, somatization symptoms changed from predominantly neurologic (e.g., hysterical paralysis) to other symptoms such as fatigue and chronic pain. Edward Shorter attributes this change to three causes: (1) improvements in medical diagnostic techniques made it easier to rule out organic causes for neurologic disease; (2) the central nervous system (CNS) paradigm faded; and (3) social roles changed (e.g., the disappearance of the historical notion that “weak” women would be expected to have fainting spells and paralysis). Although hysterical neurologic symptoms have remained relatively less common in the 21st century, CNS explanations of chronic pain and fatigue are gaining prominence. For example, functional brain research has demonstrated brain dysfunction and possibly genetic contributions among some individuals with fibromyalgia and chronic fatigue syndrome. Those syndromes, while still thought by some to represent somatization variants, are currently established medical diagnoses. The major conceptual trends in the history of psychosomatic medicine are outlined in Table 13.1-1. Table 13.1-1 Major Conceptual Trends in the History of Psychosomatic Medicine

**CURRENT TRENDS** The practice of psychosomatic medicine has evolved considerably since its early clinical origins and has come to focus on psychiatric illnesses that occur in the setting of physical health care. In large part this evolution has occurred as a result of the increased complexity of medicine, the increased understanding of the relationship of medical illness to psychiatric illness, and the greater appreciation of mind and body as one. A key outcome of this has been the granting of subspecialty status for psychosomatic medicine. Clinical care is now delivered in a variety of health care settings and utilizes an ever expanding set of diagnostic tools, as well as many effective somatic and psychotherapeutic interventions. Research in the area has progressed to include a

greater understanding of the relationship between chronic medical conditions and psychiatric disorders and has examined the pathophysiologic relationships, the epidemiology of comorbid medical and psychiatric disorders, and the role specific interventions play in physiologic, clinical, and economic outcomes (Table 13.1-2). Table 13.1-2 Summary of Clinical Problems in Psychosomatic Medicine Psychiatric morbidity is very common in patients with medical conditions, with a prevalence ranging from 20 to 67 percent, depending on the illness. Patients in the general hospital have the highest rate of psychiatric disorders when compared with community samples or patients in ambulatory primary care. For example, compared with community samples, depressive disorders in the general hospital are more than twice as common, and substance abuse is two to three times as common. Delirium occurs in 18 percent of patients. Similarly, increased rates are seen in primary and long-term care. Psychiatric morbidity has serious effects on medically ill patients and is often a risk factor for their medical conditions. It is well established that depression is both a risk factor and a poor prognostic indicator in coronary artery disease. Psychiatric illness

worsens cardiac morbidity and mortality in patients with a history of myocardial infarction, diminishes glycemic control in patients with diabetes, and decreases return to functioning in

patients experiencing a stroke. Depressive and anxiety disorders compound the disability associated with stroke. In the context of neurodegenerative disease such as Parkinson's or Alzheimer's, depression, psychosis, and behavioral disturbances are significant predictors of functional decline, institutionalization, and caregiver burden. Hospitalized patients with delirium are significantly less likely to improve in function compared with patients without delirium. Delirium is associated with worse outcomes after surgery, even after controlling for severity of medical illness. In addition, depression and other mental disorders significantly impact quality of life and the ability of patients to adhere to treatment regimens (e.g., in patients with diabetes mellitus). Psychiatric disorders are linked to nonadherence with antiretroviral therapy, adversely affecting the survival of human immunodeficiency virus (HIV)-infected patients. Psychiatric disorders worsen the prognosis and quality of life of cancer patients. Psychiatric disorders are also linked to nonadherence with safe sex guidelines and with use of sterile needles in HIV-infected injection drug users, thus having major public health implications.

#### EVALUATION PROCESS IN PSYCHOSOMATIC MEDICINE

Psychiatric assessment in the medical setting includes a standard psychiatric assessment as well as a particular focus on the medical history and context of physical health care. In addition to obtaining a complete psychiatric history, including past history, family history, developmental history, and a review of systems, the medical history and current treatment should be reviewed and documented. A full mental status examination, including a cognitive examination, should be completed, and components of a neurologic and physical examination may be indicated depending on the nature of the presenting problem. Another important objective of the psychiatric evaluation is to gain an understanding of the patient's experience of his or her illness. In many cases, this becomes the central focus for both the psychiatric assessment and interventions. It is often helpful to develop an understanding of the patient's developmental and personal history as well as key dynamic conflicts, which in turn may help to make the patient's experience with illness more comprehensible. Such an evaluation can include use of the concepts of stress, personality traits, coping strategies, and defense mechanisms. Observations and hypotheses that are developed can help to guide a patient's psychotherapy aimed at diminishing distress and may also be helpful for the primary medical team in their interactions with the patient. Finally, a full report synthesizing the information should be completed and include specific recommendations for additional evaluations and intervention. Ideally, the report should be accompanied by a discussion with the referring physician.

#### TREATMENTS USED IN PSYCHOSOMATIC MEDICINE

A host of interventions have been successfully utilized in psychosomatic medicine. Specific consideration must be given to medical illness and treatments when making recommendations for psychotropic medications. Psychotherapy also plays an important role in psychosomatic medicine and may vary in its structure and outcomes as compared with therapy that occurs in a mental health practice. Psychopharmacologic recommendations need to consider several important factors. In addition to targeting a patient's active symptoms, considering the history of illness and treatments, and weighing the particular side-effect profile of a particular medication, there are several other factors that must be considered that relate to the patient's medical illness and treatment. It is critical to evaluate potential drug-drug interactions and contraindications to the use of potential psychotropic agents. Because the majority of psychotropic medications used are metabolized in the liver, awareness of liver function is important. General appreciation of side effects, such as weight gain, risk of development of diabetes, and cardiovascular risk, must be considered in the choice of medications. In addition, it is also important to incorporate knowledge of recent data that outline effectiveness and specific risks involved for patients with co-occurring

psychiatric and physical disorders. For example, a greater understanding of the side effects of antipsychotic medications has raised concerns about the use of these medications in patients with dementia. The use of psychosocial interventions also requires adaptation when used in this population. The methods and the goals of psychosocial interventions used in the medically ill are often determined by the consideration of disease onset, etiology, course, prognosis, treatment, and understanding of the nature of the presenting psychiatric symptoms in addition to an understanding of the patient's existing coping skills and social support networks. However, there are ample data that psychosocial interventions are effective in addressing a series of identified problems and that such interventions in many cases are associated with a variety of positive clinical outcomes.

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# 02 - 13.2 Somatic Symptom Disorder

## 13.2 Somatic Symptom Disorder

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### 13.2 Somatic Symptom Disorder

Somatic symptom disorder, also known as hypochondriasis, is characterized by 6 or more months of a general and nondelusional preoccupation with fears of having, or the idea that one has, a serious disease based on the person's misinterpretation of bodily symptoms. This preoccupation causes significant distress and impairment in one's life; it is not accounted for by another psychiatric or medical disorder; and a subset of individuals with somatic symptom disorder has poor insight about the presence of this disorder.

#### EPIDEMIOLOGY

In general medical clinic populations, the reported 6-month prevalence of this disorder is 4 to 6 percent, but it may be as high as 15 percent. Men and women are equally affected by this disorder. Although the onset of symptoms can occur at any age, the disorder most commonly appears in persons 20 to 30 years of age. Some evidence indicates that this diagnosis is more common among blacks than among whites, but social position, education level, gender, and marital status do not appear to affect the diagnosis. This disorder's complaints reportedly occur in about 3 percent of medical students, usually in the first 2 years, but they are generally transient.

#### ETIOLOGY

Persons with this disorder augment and amplify their somatic sensations; they have low thresholds for, and low tolerance of, physical discomfort. For example, what persons normally perceive as abdominal pressure, persons with somatic symptom disorder experience as abdominal pain. They may focus on bodily sensations, misinterpret them, and become alarmed by them because of a faulty cognitive scheme. Somatic symptom disorder

can also be understood in terms of a social learning model. The symptoms of this disorder are viewed as a request for admission to the sick role

made by a person facing seemingly insurmountable and insolvable problems. The sick role offers an escape that allows a patient to avoid noxious obligations, to postpone unwelcome challenges, and to be excused from usual duties and obligations. Somatic symptom disorder is sometimes a variant form of other mental disorders, among which depressive disorders and anxiety disorders are most frequently included. An estimated 80 percent of patients with this disorder may have coexisting depressive or anxiety disorders. Patients who meet the diagnostic criteria for somatic symptom disorder may be somatizing subtypes of these other disorders. The psychodynamic school of thought holds that aggressive and hostile wishes toward others are transferred (through repression and displacement) into physical complaints. The anger of patients with this disorder originates in past disappointments, rejections, and losses, but the patients express their anger in the present by soliciting the help and concern of other persons and then rejecting them as ineffective. This disorder is also viewed as a defense against guilt, a sense of innate badness, an expression of low self-esteem, and a sign of excessive self-concern. Pain and somatic suffering thus become means of atonement and expiation (undoing) and can be experienced as deserved punishment for past wrongdoing (either real or imaginary) and for a person's sense of wickedness and sinfulness.

**DIAGNOSIS** According to the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the diagnostic criteria for somatic symptom disorder require that patients be preoccupied with the false belief that they have a serious disease, based on their misinterpretation of physical signs or sensations (Table 13.2-1). The belief must last at least 6 months, despite the absence of pathological findings on medical and neurological examinations. The diagnostic criteria also require that the belief cannot have the intensity of a delusion (more appropriately diagnosed as delusional disorder) and cannot be restricted to distress about appearance (more appropriately diagnosed as body dysmorphic disorder). The symptoms of somatic symptom disorder must be sufficiently intense to cause emotional distress or impair the patient's ability to function in important areas of life. Clinicians may specify the presence of poor insight; patients do not consistently recognize that their concerns about disease are excessive.

Table 13.2-1 DSM-5 Diagnostic Criteria for Somatic Symptom Disorder

**CLINICAL FEATURES** Patients with somatic symptom disorder believe that they have a serious disease that has not yet been detected and they cannot be persuaded to the contrary. They may maintain a belief that they have a particular disease or, as time progresses, they may transfer their belief to another disease. Their convictions persist despite negative laboratory results, the benign course of the alleged disease over time, and appropriate reassurances from physicians. Yet, their beliefs are not sufficiently fixed to be delusions. Somatic symptom disorder is often accompanied by symptoms of depression and anxiety and commonly coexists with a depressive or anxiety disorder. A severe case of somatic symptom disorder that highlights diagnostic, prognostic, and management issues is described in the case study. Mr. K, a white man in his mid-30s, consulted a general medicine clinic complaining of gastrointestinal problems. Major presenting symptoms were a long list of physical symptoms and concerns mostly related to the gastrointestinal system. These included

abdominal pain, left lower quadrant cramps, bloating, persistent sense of fullness in stomach hours after eating, intolerance to foods, constipation, decrease in physical stamina, heart palpitations,

and feelings that “skin is getting yellow” and “not getting enough oxygen.” A review of systems disclosed disturbances from virtually every organ system, including tired eyes with blurred vision, sore throat and “lump” in throat, heart palpitations, irregular heartbeat, dizziness, trouble breathing, and general weakness. The patient reported that symptoms started prior to the age of 30 years. For more than a decade, he had been seen by psychiatrists, general practitioners, and all kinds of medical specialists, including surgeons. He used the Internet constantly and traveled extensively in search of expert evaluations, seeking new procedures and diagnostic assessments. He had undergone repeated colonoscopies, sigmoidoscopies, and computed tomographic (CT) scans, magnetic resonance imaging (MRI) studies, and ultrasound examinations of the abdomen that had failed to disclose any pathology. He was on disability and had been unable to work for more than 2 years due to his condition. About 3 years before his visit to the medicine clinic, his abdominal complaints and his fixed belief that he had an intestinal obstruction led to an exploratory surgical intervention for the first time, apparently with negative findings. However, according to the patient, the surgery “got things even worse,” and since then he had been operated on at least five other occasions. During these surgeries he has undergone subtotal colectomies and ileostomies due to possible “adhesions” to rule out “mechanical” obstruction. However, available records from some of the surgeries do not disclose any specific pathology other than “intractable constipation.” Pathological specimens were also inconclusive. The physical examination showed a well-developed, well-nourished male, who was afebrile. A complete physical and neurological examination was normal except for examination of the abdomen, which revealed multiple abdominal scars. Right ileostomy was present, with soft stool in the bag and active bowel sounds. There was no point tenderness and no abdominal distension. During the examination, the patient kept pointing to an area of “hardness” in the left lower quadrant that he thought was a “tight muscle strangling his bowels.” However, the examination did not disclose any palpable mass. Skin and extremities were all within normal limits, and all joints had full range of motion and no swelling. Musculature was well developed. Neurological examination was within normal limits. The patient was scheduled for brief monthly visits by the primary care physician, during which the doctor performed brief physicals, reassured the patient, and allowed the patient to talk about “stressors.” The physician avoided invasive tests or diagnostic procedures, did not prescribe any medications, and avoided telling the patient that the symptoms were mental or “all in his head.” The primary care physician then referred the patient back to psychiatry. The psychiatrist confirmed a long list of physical symptoms that started before the age of 30 years, most of which remained medically unexplained. The psychiatric

examination revealed some anxiety symptoms, including apprehension, tension, uneasiness, and somatic components such as blushing and palpitations that seemed particularly prominent in front of social situations. Possible symptoms of depression included mild dysphoria, low energy, and sleep disturbance, all of which the patient blamed on his “medical” problems. The mental status examination showed that Mr. K’s mood was rather somber and pessimistic, although he denied feeling sad or depressed. Affect was irritable. He was somatically focused and had little if any psychological insight. The examination revealed the presence of a few life stressors (unemployment, financial problems, and family issues) that the patient quickly discounted as unimportant. Although the patient continued to deny having any psychiatric problems or any need for psychiatric intervention or treatment, he agreed to a few regular visits to continue to assess his situation. He refused to engage anyone from his family in this process. Efforts to engage the patient with formal therapy such as cognitive-behavioral therapy (CBT) or a medication trial were

all futile, so he was seen only for “supportive psychotherapy,” with the hope of developing rapport and preventing additional iatrogenic complications. During the follow-up period, the patient was operated on at least one more time and continued to complain of abdominal bloating and constipation and to rely on laxatives. The belief that there was a mechanical obstruction of the intestines continued to be firmly held by the patient and bordered on the delusional. However, he continued to refuse pharmacological treatment. The only medication he accepted was a low-dose benzodiazepine for anxiety. He continued to monitor his intestinal function 24 hours per day and to seek evaluation by prominent specialists, traveling to high-profile specialty centers far from home in search of solutions. (Courtesy of J. I. Escobar, M.D.) Although DSM-5 specifies that the symptoms must be present for at least 6 months, transient manifestations can occur after major stresses, most commonly the death or serious illness of someone important to the patient or a serious (perhaps lifethreatening) illness that has been resolved but that leaves the patient temporarily affected in its wake. Such states that last fewer than 6 months are diagnosed as “Other Specified Somatic Symptom and Related Disorders” in DSM-5. Transient somatic symptom disorder responds to external stress generally remit when the stress is resolved, but they can become chronic if reinforced by persons in the patient’s social system or by health professionals.

**DIFFERENTIAL DIAGNOSIS** Somatic symptom disorder must be differentiated from nonpsychiatric medical conditions, especially disorders that show symptoms that are not necessarily easily diagnosed. Such diseases include acquired immunodeficiency syndrome (AIDS), endocrinopathies, myasthenia gravis, multiple sclerosis, degenerative diseases of the nervous system, systemic lupus erythematosus, and occult neoplastic disorders.

Somatic symptom disorder is differentiated from illness anxiety disorder (a new diagnosis in DSM-5 discussed in Section 13.3) by the emphasis in illness anxiety disorder on fear of having a disease rather than a concern about many symptoms. Patients with illness anxiety disorder usually complain about fewer symptoms than patients with somatic symptom disorder; they are primarily concerned about being sick. Conversion disorder is acute and generally transient and usually involves a symptom rather than a particular disease. The presence or absence of *la belle indifférence* is an unreliable feature with which to differentiate the two conditions. Patients with body dysmorphic disorder wish to appear normal, but believe that others notice that they are not, whereas those with somatic symptom disorder seek out attention for their presumed diseases. Somatic symptom disorder can also occur in patients with depressive disorders and anxiety disorders. Patients with panic disorder may initially complain that they are affected by a disease (e.g., heart trouble), but careful questioning during the medical history usually uncovers the classic symptoms of a panic attack. Delusional disorder beliefs occur in schizophrenia and other psychotic disorders, but can be differentiated from somatic symptom disorder by their delusional intensity and by the presence of other psychotic symptoms. In addition, schizophrenic patients’ somatic delusions tend to be bizarre, idiosyncratic, and out of keeping with their cultural milieus, as illustrated in the case below. A 52-year-old man complained “my guts are rotting away.” Even after an extensive medical workup, he could not be reassured that he was not ill. Somatic symptom disorder is distinguished from factitious disorder with physical symptoms and from malingering in that patients with somatic symptom disorder actually experience and do not simulate the symptoms they report.

**COURSE AND PROGNOSIS** The course of the disorder is usually episodic; the episodes last from months to years and are separated by equally long quiescent periods. There may be an obvious association between exacerbations of somatic symptoms and psychosocial stressors. Although no well-conducted large outcome studies have been reported, an estimated

one third to one half of all patients with somatic symptom disorder eventually improve significantly. A good prognosis is associated with high socioeconomic status, treatment-responsive anxiety or depression, sudden onset of symptoms, the absence of a personality disorder, and the absence of a related nonpsychiatric medical condition. Most children with the disorder recover by late adolescence or early adulthood. **TREATMENT** Patients with somatic symptom disorder usually resist psychiatric treatment, although

some accept this treatment if it takes place in a medical setting and focuses on stress reduction and education in coping with chronic illness. Group psychotherapy often benefits such patients, in part because it provides the social support and social interaction that seem to reduce their anxiety. Other forms of psychotherapy, such as individual insight-oriented psychotherapy, behavior therapy, cognitive therapy, and hypnosis, may be useful. Frequent, regularly scheduled physical examinations help to reassure patients that their physicians are not abandoning them and that their complaints are being taken seriously. Invasive diagnostic and therapeutic procedures should only be undertaken, however, when objective evidence calls for them. When possible, the clinician should refrain from treating equivocal or incidental physical examination findings.

Pharmacotherapy alleviates somatic symptom disorder only when a patient has an underlying drug-responsive condition, such as an anxiety disorder or depressive disorder. When somatic symptom disorder is secondary to another primary mental disorder, that disorder must be treated in its own right. When the disorder is a transient situational reaction, clinicians must help patients cope with the stress without reinforcing their illness behavior and their use of the sick role as a solution to their problems. **OTHER SPECIFIED OR UNSPECIFIED SOMATIC SYMPTOM DISORDER** This DSM-5 category is used to describe conditions characterized by one or more unexplained physical symptoms of at least 6 months' duration, which are below the threshold for a diagnosis of somatic symptom disorder. The symptoms are not caused, or fully explained, by another medical, psychiatric, or substance abuse disorder, and they cause clinical significant distress or impairment. Two types of symptom patterns may be seen in patients with other specified or unspecified somatic symptom disorder: those involving the autonomic nervous system and those involving sensations of fatigue or weakness. In what is sometimes referred to as autonomic arousal disorder, some patients are affected with symptoms that are limited to bodily functions innervated by the autonomic nervous system. Such patients have complaints involving the cardiovascular, respiratory, gastrointestinal, urogenital, and dermatological systems. Other patients complain of mental and physical fatigue, physical weakness and exhaustion, and inability to perform many everyday activities because of their symptoms. Some clinicians believe this syndrome is neurasthenia, a diagnosis used primarily in Europe and Asia. The syndrome may overlap with chronic fatigue syndrome, which various research reports have hypothesized to involved psychiatric, virological, and immunological factors. (See Chapter 14, which discusses chronic fatigue syndrome in depth.) Other conditions included in this unspecified category of somatic symptom disorder are pseudocyesis (discussed in Chapter 27) and conditions that may not have met the 6-month criterion of the other somatic symptom disorders.

# 03 - 13.3 Illness Anxiety Disorder

## 13.3 Illness Anxiety Disorder

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13.3 Illness Anxiety Disorder Illness anxiety disorder is a new diagnosis in the fifth edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-5) that applies to those persons who are preoccupied with being sick or with developing a disease of some kind. It is a variant of somatic symptom disorder (hypochondriasis) described in Section 13.2. As stated in DSM-5: Most individuals with hypochondriasis are now classified as having somatic symptom disorder; however, in a minority of cases, the diagnosis of illness anxiety disorder applies instead. In describing the differential diagnosis between the two, according to DSM-5, somatic symptom disorder is diagnosed when somatic symptoms are present, whereas in illness anxiety disorder, there are few or no somatic symptoms and persons are “primarily concerned with the idea they are ill.” The diagnosis may also be used for persons who do, in fact, have a medical illness but whose

anxiety is out of proportion to their diagnosis and who assume the worst possible outcome imaginable.

**EPIDEMIOLOGY** The prevalence of this disorder is unknown aside from using data that relate to hypochondriasis, which gives a prevalence of 4 to 6 percent in a general medical clinic population. In other surveys, up to 15 percent of persons in the general population worry about becoming sick and incapacitated as a result. One might expect the disorder to be diagnosed more frequently in older rather than younger persons. There is no evidence to date that the diagnosis is more common among different races or that gender, social position, education level, and marital status affect the diagnosis. **ETIOLOGY** The etiology is unknown. The social learning model described for somatic symptom disorder may apply to this disorder as well. In that construct, the fear of illness is viewed as a request to play the sick role made by someone facing seemingly insurmountable and insolvable problems. The sick role offers an escape that allows a patient to be excused from usual duties and obligations. The psychodynamic school of thought is also similar to somatic symptom disorder. Aggressive and hostile wishes toward others are transferred into minor physical complaints or the fear of physical illness. The anger of patients with illness anxiety disorder, as in those with hypochondriasis, originates in past disappointments, rejections, and losses. Similarly, the fear of illness is also viewed as a defense against guilt, a sense of innate badness, an expression of low self-esteem, and a sign of excessive self-concern. The feared illness may also be seen as punishment for past either real or imaginary wrongdoing. The nature of the person's relationships to significant others in his or her past life may also be significant. A parent who died from a specific illness, for example, might be the stimulus for the fear of developing that illness in the offspring of that parent. The type of the fear may also be symbolic of unconscious conflicts that are reflected in the type of illness of which the person is afraid or the organ system selected (e.g., heart, kidney). **DIAGNOSIS** The major DSM-5 diagnostic criteria for illness anxiety disorder are that patients be preoccupied with the false belief that they have or will develop a serious disease and there are few if any physical signs or symptoms (Table 13.3-1). The belief must last at least 6 months, and there are no pathological findings on medical or neurological examinations. The belief cannot have the fixity of a delusion (more appropriately diagnosed as delusional disorder) and cannot be distress about appearance (more appropriately diagnosed as body dysmorphic disorder). The anxiety about illness must be incapacitating and cause emotional distress or impair the patient's ability to function in important areas of life. Some persons with the disorder may visit physicians (careseeking type) while others may not (care-avoidant type). The majority of patients, however, make repeated visits to physicians and other health care providers.

Table 13.3-1 DSM-5 Diagnostic Criteria for Illness Anxiety Disorder **CLINICAL FEATURES** Patients with illness anxiety disorder, like those with somatic symptom disorder, believe that they have a serious disease that has not yet been diagnosed, and they cannot be persuaded to the contrary. They may maintain a belief that they have a particular disease or, as time progresses, they may transfer their belief to another disease. Their convictions persist despite negative laboratory results, the benign course of the alleged disease over time, and appropriate reassurances from physicians. Their preoccupation with illness interferes with their interaction with family, friends, and coworkers. They are often addicted to Internet searches about their feared illness, inferring the worst from information (or misinformation) they find there. **DIFFERENTIAL DIAGNOSIS** Illness anxiety disorder must be differentiated from other medical conditions. Too often these patients are dismissed as "chronic complainers" and careful medical examinations are not performed. Patients

with illness anxiety disorder are differentiated from those with somatic symptom disorder by the emphasis in illness anxiety disorder on fear of

having a disease versus the emphasis in somatic symptom disorder on concern about many symptoms; but both may exist to varying degrees in each disorder. Patients with illness anxiety disorder usually complain about fewer symptoms than patients with somatic symptom disorder. Somatic symptom disorder usually has an onset before age 30, whereas illness anxiety disorder has a less specific age of onset. Conversion disorder is acute, generally transient, and usually involves a symptom rather than a particular disease. Pain disorder is chronic, as is hypochondriasis, but the symptoms are limited to complaints of pain. The fear of illness can also occur in patients with depressive and anxiety disorders. If a patient meets the full diagnostic criteria for both illness anxiety disorder and another major mental disorder, such as major depressive disorder or generalized anxiety disorder, the patient should receive both diagnoses. Patients with panic disorder may initially complain that they are affected by a disease (e.g., heart trouble), but careful questioning during the medical history usually uncovers the classic symptoms of a panic attack. Delusional beliefs occur in schizophrenia and other psychotic disorders but can be differentiated from illness anxiety disorder by their delusional intensity and by the presence of other psychotic symptoms. In addition, schizophrenic patients' somatic delusions tend to be bizarre, idiosyncratic, and out of keeping with their cultural milieus. Illness anxiety disorder can be differentiated from obsessive-compulsive disorder by the singularity of their beliefs and by the absence of compulsive behavioral traits; but there is often an obsessive quality to the patients' fear.

**COURSE AND PROGNOSIS** Because the disorder is only recently described, there are no reliable data about the prognosis. One may extrapolate from the course of somatic symptom disorder, which is usually episodic; the episodes last from months to years and are separated by equally long quiescent periods. As with hypochondriasis, a good prognosis is associated with high socioeconomic status, treatment-responsive anxiety or depression, sudden onset of symptoms, the absence of a personality disorder, and the absence of a related nonpsychiatric medical condition.

**TREATMENT** As with somatic symptom disorder, patients with illness anxiety disorder usually resist psychiatric treatment, although some accept this treatment if it takes place in a medical setting and focuses on stress reduction and education in coping with chronic illness. Group psychotherapy may be of help especially if the group is homogeneous with patients suffering from the same disorder. Other forms of psychotherapy, such as individual insight-oriented psychotherapy, behavior therapy, cognitive therapy, and hypnosis, may be useful. The role of frequent, regularly scheduled physical examinations is controversial. Some patients may benefit from being reassured that their complaints are being taken seriously and that they do not have the illness of which they are afraid. Others,

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## 13.4 Functional Neurological Symptom Disorder (Conversion Disorder)

however, are resistant to seeing a doctor in the first place, or, if having done so, of accepting the fact that there is nothing to worry about. Invasive diagnostic and therapeutic procedures should only be undertaken when objective evidence calls for them. When possible, the clinician should refrain from treating equivocal or incidental physical examination findings. Pharmacotherapy may be of help in alleviating the anxiety generated by the fear that the patient has about illness, especially if it is one that is life-threatening; but it is only ameliorative and cannot provide lasting relief. That can only come from an effective psychotherapeutic program that is acceptable to the patient and in which he or she is willing and able to participate. REFERENCES Blumenfield M, Strain JJ. Psychosomatic Medicine. Philadelphia: Lippincott Williams & Wilkins; 2006. Brakoulias V. DSM-5 bids farewell to hypochondriasis and welcomes somatic symptom disorder and illness anxiety disorder. Aust N Z J Psychiatry. 2014 Feb 26. [Epub ahead of print]. Brody S. Hypochondriasis: Attentional, sensory, and cognitive factors. Psychosomatics. 2013;54(1):98. El-Gabalawy R, Mackenzie CS, Thibodeau MA, Asmundson GJG, Sareen J. Health anxiety disorders in older adults: Conceptualizing complex conditions in late life. Clin Psychol Rev. 2013;33(8):1096-1105. Escobar JI, Gara MA, Diaz-Martinez A, Interian A, Warman M. Effectiveness of a time-limited, cognitive behavior therapy- type intervention among primary care patients with medically unexplained symptoms. Ann Fam Med. 2007;5:328-335. Gropalis M, Bleichhardt G, Hiller W, Witthoft M. Specificity and modifiability of cognitive biases in hypochondriasis. J Consult Clin Psychol. 2013;81(3):558-565. Hirsch JK, Walker KL, Chang EC, Lyness JM. Illness burden and symptoms of anxiety in older adults: Optimism and pessimism as moderators. Int Psychogeriatr. 2012;24(10):1614-1621. Höfling V, Weck F. Assessing bodily preoccupations is sufficient: Clinically effective screening for hypochondriasis. J Psychosom Res. 2013;75(6):526-531. Holmes TH, Rahe RH. The social

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Conversion disorder, also called functional neurological symptom disorder in the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5), is an illness of symptoms or deficits that affect voluntary motor or sensory functions, which suggest another medical condition, but that is judged to be caused by psychological factors because the illness is preceded by conflicts or other stressors. The symptoms or deficits of conversion disorder are not intentionally produced, are not caused by substance use, are not limited to pain or sexual symptoms, and the gain is primarily psychological and not social, monetary, or legal (Table 13.4-1). Table 13.4-1 Common Symptoms of Conversion Disorder The syndrome currently known as conversion disorder was originally combined with the syndrome known as somatization disorder and was referred to as hysteria, conversion reaction, or dissociative reaction. Paul Briquet and Jean-Martin Charcot contributed to the development of the concept of conversion disorder by noting the influence of heredity on the symptom and the common association with a traumatic event. The term conversion was introduced by Sigmund Freud, who, based on his work with Anna O, hypothesized that the symptoms of conversion disorder reflect unconscious conflicts. EPIDEMIOLOGY Some symptoms of conversion disorder that are not sufficiently severe to warrant the diagnosis may occur in up to one third of the general population sometime during their lives. Reported rates of conversion disorder vary from 11 of 100,000 to 300 of 100,000 in general population samples. Among specific populations, the occurrence of conversion disorder may be even higher than that, perhaps making conversion disorder the most common somatoform disorder in some populations. Several studies have reported that 5 to 15 percent of psychiatric consultations in a general hospital and 25 to

30 percent of admissions to a Veterans Administration hospital involve patients with conversion disorder diagnoses. The ratio of women to men among adult patients is at least 2 to 1 and as much as 10 to 1; among children, an even higher predominance is seen in girls. Symptoms are more common on the left than on the right side of the body in women. Women who present with conversion symptoms are more likely subsequently to develop somatization disorder than women who have not had conversion symptoms. An association exists between conversion disorder and antisocial personality disorder in men. Men with conversion disorder have often been involved in occupational or military accidents. The onset of conversion disorder is generally from late childhood to early adulthood and is rare before 10 years of age or after 35 years of age, but onset as late as the ninth decade of life has been reported. When symptoms suggest a conversion disorder onset in middle or old age, the probability of an occult neurological or other medical condition is high. Conversion symptoms in children younger than 10 years of age are usually

limited to gait problems or seizures. Data indicate that conversion disorder is most common among rural populations, persons with little education, those with low intelligence quotients, those in low socioeconomic groups, and military personnel who have been exposed to combat situations. Conversion disorder is commonly associated with comorbid diagnoses of major depressive disorder, anxiety disorders, and schizophrenia and shows an increased frequency in relatives of probands with conversion disorder. Limited data suggest that conversion symptoms are more frequent in relatives of people with conversion disorder. An increased risk of conversion disorder in monozygotic, but not dizygotic, twin pairs has been reported. COMORBIDITY Medical and, especially, neurological disorders occur frequently among patients with conversion disorders. What is typically seen in these comorbid neurological or medical conditions is an elaboration of symptoms stemming from the original organic lesion. Depressive disorders, anxiety disorders, and somatization disorders are especially noted for their association with conversion disorder. Conversion disorder in schizophrenia is reported, but it is uncommon. Studies of patients admitted to a psychiatric hospital for conversion disorder reveal, on further study, that one quarter to one half have a clinically significant mood disorder or schizophrenia. Personality disorders also frequently accompany conversion disorder, especially the histrionic type (in 5 to 21 percent of cases) and the passive-dependent type (9 to 40 percent of cases). Conversion disorders can occur, however, in persons with no predisposing medical, neurological, or psychiatric disorder. ETIOLOGY Psychoanalytic Factors

According to psychoanalytic theory, conversion disorder is caused by repression of unconscious intrapsychic conflict and conversion of anxiety into a physical symptom. The conflict is between an instinctual impulse (e.g., aggression or sexuality) and the prohibitions against its expression. The symptoms allow partial expression of the forbidden wish or urge but disguise it, so that patients can avoid consciously confronting their unacceptable impulses; that is, the conversion disorder symptom has a symbolic relation to the unconscious conflict—for example, vaginismus protects the patient from expressing unacceptable sexual wishes. Conversion disorder symptoms also allow patients to communicate that they need special consideration and special treatment. Such symptoms may function as a nonverbal means of controlling or manipulating others. Learning Theory In terms of conditioned learning theory, a conversion symptom can be seen as a piece of classically conditioned learned behavior; symptoms of illness, learned in childhood, are called forth as a means of coping with an otherwise impossible situation. Biological Factors Increasing data implicate biological and neuropsychological factors in the development of conversion disorder symptoms. Preliminary brain-imaging studies have found hypometabolism of the dominant hemisphere and hypermetabolism of the nondominant hemisphere and have implicated impaired hemispheric communication in the cause of conversion disorder. The symptoms may be caused by an excessive cortical arousal that sets off negative feedback loops between the cerebral cortex and the brainstem reticular formation. Elevated levels of corticofugal output, in turn, inhibit the patient's awareness of bodily sensation, which may explain the observed sensory deficits in some patients with conversion disorder. Neuropsychological tests sometimes reveal subtle cerebral impairments in verbal communication, memory, vigilance, affective incongruity, and attention in these patients. DIAGNOSIS The DSM-5 limits the diagnosis of conversion disorder to those symptoms that affect a voluntary motor or sensory function, that is, neurological symptoms. Physicians cannot explain the neurological symptoms solely on the basis of any known neurological condition. The diagnosis of conversion disorder requires that clinicians find a necessary and critical association between the cause of the neurological symptoms and psychological factors, although

the symptoms cannot result from malingering or factitious disorder. The diagnosis of conversion disorder also excludes symptoms of pain and sexual dysfunction and symptoms that occur only in somatization disorder. DSM-5 allows specification of the type of symptom or deficit seen in conversion disorder, for example,

with weakness or paralysis, with abnormal movements, or with attacks or seizures. **CLINICAL FEATURES** Paralysis, blindness, and mutism are the most common conversion disorder symptoms. Conversion disorder may be most commonly associated with passive-aggressive, dependent, antisocial, and histrionic personality disorders. Depressive and anxiety disorder symptoms often accompany the symptoms of conversion disorder, and affected patients are at risk for suicide. Mr. J is a 28-year-old single man who is employed in a factory. He was brought to an emergency department by his father, complaining that he had lost his vision while sitting in the back seat on the way home from a family gathering. He had been playing volleyball at the gathering but had sustained no significant injury except for the volleyball hitting him in the head a few times. As was usual for this man, he had been reluctant to play volleyball because of the lack of his athletic skills and was placed on a team at the last moment. He recalls having some problems with seeing during the game, but his vision did not become ablated until he was in the car on the way home. By the time he got to the emergency department, his vision was improving, although he still complained of blurriness and mild diplopia. The double vision could be attenuated by having him focus on items at different distances. On examination, Mr. J was fully cooperative, somewhat uncertain about why this would have occurred, and rather nonchalant. Pupillary, oculomotor, and general sensorimotor examinations were normal. After being cleared medically, the patient was sent to a mental health center for further evaluation. At the mental health center, the patient recounts the same story as he did in the emergency department, and he was still accompanied by his father. He began to recount how his vision started to return to normal when his father pulled over on the side of the road and began to talk to him about the events of the day. He spoke with his father about how he had felt embarrassed and somewhat conflicted about playing volleyball and how he had felt that he really should play because of external pressures. Further history from the patient and his father revealed that this young man had been shy as an adolescent, particularly around athletic participation. He had never had another episode of visual loss. He did recount feeling anxious and sometimes not feeling well in his body during athletic activities. Discussion with the patient at the mental health center focused on the potential role of psychological and social factors in acute vision loss. The patient was somewhat perplexed by this but was also amenable to discussion. He stated that he clearly recognized that he began seeing and feeling better when his father pulled off to the side of the road and discussed things with him. Doctors admitted that they did not know the cause of the vision loss and that it would likely not return. The patient and his father were satisfied with the medical and psychiatric evaluation and agreed to

return for care if there were any further symptoms. The patient was appointed a follow-up time at the outpatient psychiatric clinic. (Courtesy of Michael A. Hollifield, M.D.) **Sensory Symptoms** In conversion disorder, anesthesia and paresthesia are common, especially of the extremities. All sensory modalities can be involved, and the distribution of the disturbance is usually inconsistent with either central or peripheral neurological disease. Thus, clinicians may see the characteristic stocking-and-glove anesthesia of the hands or feet or the hemianesthesia of the body beginning precisely along the midline. Conversion disorder symptoms may involve the organs of special sense and can produce deafness, blindness, and tunnel vision. These symptoms can be unilateral or

bilateral, but neurological evaluation reveals intact sensory pathways. In conversion disorder blindness, for example, patients walk around without collisions or self-injury, their pupils react to light, and their cortical-evoked potentials are normal.

**Motor Symptoms** The motor symptoms of conversion disorder include abnormal movements, gait disturbance, weakness, and paralysis. Gross rhythmical tremors, choreiform movements, tics, and jerks may be present. The movements generally worsen when attention is called to them. One gait disturbance seen in conversion disorder is *astasia-abasia*, which is a wildly ataxic, staggering gait accompanied by gross, irregular, jerky truncal movements and thrashing and waving arm movements. Patients with the symptoms rarely fall; if they do, they are generally not injured. Other common motor disturbances are paralysis and paresis involving one, two, or all four limbs, although the distribution of the involved muscles does not conform to the neural pathways. Reflexes remain normal; the patients have no fasciculations or muscle atrophy (except after long-standing conversion paralysis); electromyography findings are normal.

**Seizure Symptoms** Pseudoseizures are another symptom in conversion disorder. Clinicians may find it difficult to differentiate a pseudoseizure from an actual seizure by clinical observation alone. Moreover, about one third of the patient's pseudoseizures also have a coexisting epileptic disorder. Tongue-biting, urinary incontinence, and injuries after falling can occur in pseudoseizures, although these symptoms are generally not present. Pupillary and gag reflexes are retained after pseudoseizure, and patients have no postseizure increase in prolactin concentrations.

**Other Associated Features**

Several psychological symptoms have also been associated with conversion disorder.

**Primary Gain.** Patients achieve primary gain by keeping internal conflicts outside their awareness. Symptoms have symbolic value; they represent an unconscious psychological conflict.

**Secondary Gain.** Patients accrue tangible advantages and benefits as a result of being sick; for example, being excused from obligations and difficult life situations, receiving support and assistance that might not otherwise be forthcoming, and controlling other persons' behavior.

**La Belle Indifférence.** *La belle indifférence* is a patient's inappropriately cavalier attitude toward serious symptoms; that is, the patient seems to be unconcerned about what appears to be a major impairment. That bland indifference is also seen in some seriously ill medical patients who develop a stoic attitude. The presence or absence of *la belle indifférence* is not pathognomonic of conversion disorder, but it is often associated with the condition.

**Identification.** Patients with conversion disorder may unconsciously model their symptoms on those of someone important to them. For example, a parent or a person who has recently died may serve as a model for conversion disorder. During pathological grief reaction, bereaved persons commonly have symptoms of the deceased.

**DIFFERENTIAL DIAGNOSIS** One of the major problems in diagnosing conversion disorder is the difficulty of definitively ruling out a medical disorder. Concomitant nonpsychiatric medical disorders are common in hospitalized patients with conversion disorder, and evidence of a current or previous neurological disorder or a systemic disease affecting the brain has been reported in 18 to 64 percent of such patients. An estimated 25 to 50 percent of patients classified as having conversion disorder eventually receive diagnoses of neurological or nonpsychiatric medical disorders that could have caused their earlier symptoms. Thus, a thorough medical and neurological workup is essential in all cases. If the symptoms can be resolved by suggestion, hypnosis, or parenteral amobarbital (Amytal) or lorazepam (Ativan), they are probably the result of conversion disorder. Neurological disorders (e.g., dementia and other degenerative diseases), brain tumors, and basal ganglia disease must be considered in the differential diagnosis. For example, weakness may be confused with myasthenia gravis, polymyositis, acquired myopathies, or multiple

sclerosis. Optic neuritis may be misdiagnosed as conversion disorder blindness. Other diseases that can cause confusing symptoms are Guillain-Barré syndrome, Creutzfeldt-Jakob disease, periodic paralysis, and early neurological manifestations of acquired immunodeficiency syndrome (AIDS).  
Conversion disorder

symptoms occur in schizophrenia, depressive disorders, and anxiety disorders, but these other disorders are associated with their own distinct symptoms that eventually make differential diagnosis possible. Sensorimotor symptoms also occur in somatization disorder. But somatization disorder is a chronic illness that begins early in life and includes symptoms in many other organ systems. In hypochondriasis, patients have no actual loss or distortion of function; the somatic complaints are chronic and are not limited to neurological symptoms, and the characteristic hypochondriacal attitudes and beliefs are present. If the patient's symptoms are limited to pain, pain disorder can be diagnosed. Patients whose complaints are limited to sexual function are classified as having a sexual dysfunction, rather than conversion disorder. In both malingering and factitious disorder, the symptoms are under conscious, voluntary control. A malingeringer's history is usually more inconsistent and contradictory than that of a patient with conversion disorder, and a malingeringer's fraudulent behavior is clearly goal directed. Table 13.4-2 lists examples of important tests that are relevant to conversion disorder symptoms. Table 13.4-2 Distinctive Physical Examination Findings in Conversion Disorder  
COURSE AND PROGNOSIS

The onset of conversion disorder is usually acute, but a crescendo of symptomatology may also occur. Symptoms or deficits are usually of short duration, and approximately 95 percent of acute cases remit spontaneously, usually within 2 weeks in hospitalized patients. If symptoms have been present for 6 months or longer, the prognosis for symptom resolution is less than 50 percent and diminishes further the longer that conversion is present. Recurrence occurs in one fifth to one fourth of people within 1 year of the first episode. Thus, one episode is a predictor for future episodes. A good prognosis is heralded by acute onset, presence of clearly identifiable stressors at the time of onset, a short interval between onset and the institution of treatment, and above average intelligence. Paralysis, aphonia, and blindness are associated with a good prognosis, whereas tremor and seizures are poor prognostic factors. TREATMENT Resolution of the conversion disorder symptom is usually spontaneous, although it is probably facilitated by insight-oriented supportive or behavior therapy. The most important feature of the therapy is a relationship with a caring and confident therapist. With patients who are resistant to the idea of psychotherapy, physicians can suggest that the psychotherapy will focus on issues of stress and coping. Telling such patients that their symptoms are imaginary often makes them worse. Hypnosis, anxiolytics, and behavioral relaxation exercises are effective in some cases. Parenteral amobarbital or lorazepam may be helpful in obtaining additional historic information, especially when a patient has recently experienced a traumatic event. Psychodynamic approaches include psychoanalysis and insight-oriented psychotherapy, in which patients explore intrapsychic conflicts and the symbolism of the conversion disorder symptoms. Brief and direct forms of short-term psychotherapy have also been used to treat conversion disorder. The longer the duration of these patients' sick role and the more they have regressed, the more difficult the treatment.

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# 05 - 13.5 Psychological Factors Affecting Other Me

## 13.5 Psychological Factors Affecting Other Medical Conditions

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Stone J, Smyth R, Carson A, Lewis S, Prescott R, Warlow C, Sharpe M. Systematic review of misdiagnosis of conversion symptoms and "hysteria." *BMJ.* 2005;331(7523):989. Tezcan E, Atmaca M, Kuloglu M, Gecici O, Buyukbayram A, Tutkun H. Dissociative disorders in Turkish inpatients with conversion disorder. *Comp Psychiatry.* 2003;44:324. 13.5 Psychological Factors Affecting Other Medical Conditions Psychosomatic medicine has been a specific area of study within the field of psychiatry. It is based on two basic assumptions: There is a unity of mind and body; and psychological factors must be taken into account when considering all disease states. Concepts derived from the field of psychosomatic medicine influenced both the emergence of complementary and alternative medicine (CAM), which relies heavily on examining psychological factors in the maintenance of health, and the field of holistic medicine, with its emphasis on examining and treating the whole patient, not just his or her illness. The concepts of psychosomatic medicine also influenced the field of behavioral medicine, which integrates the behavioral sciences and the biomedical approach to the prevention, diagnosis, and treatment of disease.

Psychosomatic concepts have contributed greatly to those approaches to medical care. The concepts of psychosomatic medicine are subsumed in the diagnostic entity of "Psychological Factors Affecting Other Medical Conditions." This category covers physical disorders caused by or adversely affected by emotional or psychological factors. A medical condition must always be present for the diagnosis to be made. CLASSIFICATION The diagnostic criteria for "Psychological Factors Affecting Other Medical Conditions" excluded (1) classic mental disorders that have

physical symptoms as part of the disorder (e.g., conversion disorder, in which a physical symptom is produced by psychological conflict); (2) somatization disorder, in which the physical symptoms are not based on organic pathology; (3) hypochondriasis, in which patients have an exaggerated concern with their health; (4) physical complaints that are frequently associated with mental disorders (e.g., dysthymic disorder, which usually has such somatic accompaniments as muscle weakness, asthenia, fatigue, and exhaustion); and (5) physical complaints associated with substance-related disorders (e.g., coughing associated with nicotine dependence).

**STRESS THEORY** Stress can be described as a circumstance that disturbs, or is likely to disturb, the normal physiological or psychological functioning of a person. In the 1920s, Walter Cannon (1871–1945) conducted the first systematic study of the relation of stress to disease. He demonstrated that stimulation of the autonomic nervous system, particularly the sympathetic system, readied the organism for the “fight-or-flight” response characterized by hypertension, tachycardia, and increased cardiac output. This was useful in the animal who could fight or flee; but in the person who could do neither by virtue of being civilized, the ensuing stress resulted in disease (e.g., produced a cardiovascular disorder). In the 1950s, Harold Wolff (1898–1962) observed that the physiology of the gastrointestinal (GI) tract appeared to correlate with specific emotional states. Hyperfunction was associated with hostility and hypofunction with sadness. Wolff regarded such reactions as nonspecific, believing that the patient’s reaction is determined by the general life situation and perceptual appraisal of the stressful event. Earlier, William Beaumont (1785–1853), an American military surgeon, had a patient named Alexis St. Martin, who became famous because of a gunshot wound that resulted in a permanent gastric fistula. Beaumont noted that during highly charged emotional states, the mucosa could become either hyperemic or blanch, indicating that blood flow to the stomach was influenced by emotions. Hans Selye (1907–1982) developed a model of stress that he called the general adaptation syndrome. It consisted of three phases: (1) the alarm reaction; (2) the stage of resistance, in which adaptation is ideally achieved; and (3) the stage of exhaustion, in which acquired adaptation or resistance may be lost. He considered stress a nonspecific bodily response to any demand caused by either pleasant or unpleasant conditions. Selye believed that stress, by definition, need not always be unpleasant. He called unpleasant stress distress. Accepting both types of stress requires adaptation. The body reacts to stress—in this sense defined as anything (real, symbolic, or imagined) that threatens an individual’s survival—by putting into motion a set of responses that seeks to diminish the impact of the stressor and restore homeostasis. Much is known about the physiological response to acute stress, but considerably less is known about the response to chronic stress. Many stressors occur over a prolonged period of time or have long-lasting repercussions. For example, the loss of a spouse may be followed by months or years of loneliness, and a violent sexual assault may be followed by years of apprehension and worry. Neuroendocrine and immune responses to such events help explain why and how stress can have deleterious effects. Neurotransmitter Responses to Stress Stressors activate noradrenergic systems in the brain (most notably in the locus ceruleus) and cause release of catecholamines from the autonomic nervous system. Stressors also activate serotonergic systems in the brain, as evidenced by increased

serotonin turnover. Recent evidence suggests that, although glucocorticoids tend to enhance overall serotonin functioning, differences may exist in glucocorticoid regulation of serotonin-receptor subtypes, which can have implications for serotonergic functioning in depression and related illnesses. For example, glucocorticoids can increase serotonin 5-hydroxytryptamine (5-

HT2)-mediated actions, thus contributing to the intensification of actions of these receptor types, which have been implicated in the pathophysiology of major depressive disorder. Stress also increases dopaminergic neurotransmission in mesoprefrontal pathways. Amino acid and peptidergic neurotransmitters are also intricately involved in the stress response. Studies have shown that corticotropin-releasing factor (CRF) (as a neurotransmitter, not just as a hormonal regulator of hypothalamic-pituitary-adrenal [HPA] axis functioning), glutamate (through N-methyl-D-aspartate [NMDA] receptors), and  $\gamma$ -aminobutyric acid (GABA) all play important roles in generating the stress response or in modulating other stress-responsive systems, such as dopaminergic and noradrenergic brain circuitry. Endocrine Responses to Stress In response to stress, CRF is secreted from the hypothalamus into the hypophysial-pituitary-portal system. CRF acts at the anterior pituitary to trigger release of adrenocorticotrophic hormone (ACTH). Once ACTH is released, it acts at the adrenal cortex to stimulate the synthesis and release of glucocorticoids. Glucocorticoids themselves have myriad effects within the body, but their actions can be summarized in the short term as promoting energy use, increasing cardiovascular activity (in the service of the flight-or-fight response), and inhibiting functions such as growth, reproduction, and immunity. This HPA axis is subject to tight negative feedback control by its own end products (i.e., ACTH and cortisol) at multiple levels, including the anterior pituitary, the hypothalamus, and such suprahypothalamic brain regions as the hippocampus. In addition to CRF, numerous secretagogues (i.e., substances that elicit ACTH release) exist that can bypass CRF release and act directly to initiate the glucocorticoid cascade. Examples of such secretagogues include catecholamines, vasopressin, and oxytocin. Interestingly, different stressors (e.g., cold stress vs. hypotension) trigger different patterns of secretagogue release, again demonstrating that the notion of a uniform stress response to a generic stressor is an oversimplification. Immune Response to Stress Part of the stress response consists of the inhibition of immune functioning by glucocorticoids. This inhibition may reflect a compensatory action of the HPA axis to mitigate other physiological effects of stress. Conversely, stress can also cause immune activation through a variety of pathways. CRF itself can stimulate norepinephrine release via CRF receptors located on the locus ceruleus, which activates the sympathetic

nervous system, both centrally and peripherally, and increases epinephrine release from the adrenal medulla. In addition, direct links of norepinephrine neurons synapse on immune target cells. Thus, in the face of stressors, profound immune activation also occurs, including the release of humoral immune factors (cytokines) such as interleukin1 (IL-1) and IL-6. These cytokines can themselves cause further release of CRF, which in theory serves to increase glucocorticoid effects and thereby self-limit the immune activation. Life Events A life event or situation, favorable or unfavorable (Selye's distress), often occurring by chance, generates challenges to which the person must adequately respond. Thomas Holmes and Richard Rahe constructed a social readjustment rating scale after asking hundreds of persons from varying backgrounds to rank the relative degree of adjustment required by changing life events. Holmes and Rahe listed 43 life events associated with varying amounts of disruption and stress in average persons' lives and assigned each of them a certain number of units: for example, the death of a spouse, 100 life-change units; divorce, 73 units; marital separations, 65 units; and the death of a close family member, 63 units. Accumulation of 200 or more life-change units in a single year increases the risk of developing a psychosomatic disorder in that year. Of interest, persons who face general stresses optimistically, rather than pessimistically, are less apt to experience psychosomatic disorders; if they do, they are more apt to recover easily (Table 13.5-1). Table 13.5-1 Social Readjustment

## Rating Scale

Specific versus Nonspecific Stress Factors In addition to life stresses such as a divorce or the death of a spouse, some investigators have suggested that specific personalities and conflicts are associated with certain psychosomatic diseases. A specific personality or a specific unconscious conflict may contribute to the development of a specific psychosomatic disorder. Researchers first identified specific personality types in connection with coronary disease. An individual with a coronary personality is a hard-driving, competitive, aggressive person who is predisposed to coronary artery disease. Meyer Friedman and Ray Rosenman first defined two types: (1) type A—similar to the coronary personality—and (2) type B personalities—calm, relaxed, and not susceptible to coronary disease. Franz Alexander was a major proponent of the theory that specific unconscious conflicts are associated with specific psychosomatic disorders. For example, persons susceptible to having a peptic ulcer were believed to have strong ungratified dependency needs. Persons with essential hypertension were considered to have hostile impulses about which they felt guilty. Patients with bronchial asthma had issues with separation anxiety. The specific psychic stress theory is no longer considered a reliable indicator of who will develop which disorder; the nonspecific stress theory is more acceptable to most workers in the field today. Nevertheless, chronic stress, usually with the intervening variable of anxiety, predisposes certain persons to psychosomatic disorders. The vulnerable organ may be anywhere in the body. Some persons are “stomach reactors,” others are “cardiovascular reactors,” “skin reactors,” and so on. The diathesis or susceptibility of an organ system to react to stress is probably of genetic

origin; but it may also result from acquired vulnerability (e.g., lungs weakened by smoking). According to psychoanalytic theory, the choice of the afflicted region is determined by unconscious factors, a concept known as somatic compliance. For example, Freud reported on a male patient with fears of homosexual impulses who developed pruritus ani and a woman with guilt over masturbation who developed vulvodynia. Another nonspecific factor is the concept of alexithymia, developed by Peter Sifneos and John Nemiah, in which persons cannot express feelings because they are unaware of their mood. Such patients develop tension states that leave them susceptible to develop somatic diseases. SPECIFIC ORGAN SYSTEMS Gastrointestinal System GI disorders rank high in medical illnesses associated with psychiatric consultation. This ranking reflects the high prevalence of GI disorders and the link between psychiatric disorders and GI somatic symptoms. A significant proportion of GI disorders are functional disorders. Psychological and psychiatric factors commonly influence onset, severity, and outcome in the functional GI disorders. Functional Gastrointestinal Disorders. Table 13.5-2 outlines the spectrum of functional GI disorders, which can include symptoms identified throughout the GI tract. Table 13.5-2 Functional Gastrointestinal Disorders

The case history presented here illustrates the relationship between psychiatric illness, GI disease, and GI disorders. A freshman, male, college cross-country athlete was referred for psychiatric consultation with complaints of frequent belching and anxiety. The patient had been a successful high school runner, but had struggled in his early adjustment to college athletics. His performance was below that of his high school level. Consultation with a gastroenterologist failed to find a physical cause for his complaints. On psychiatric consultation, the patient noted anxiety about his ability to compete at the college level. Many more talented runners were in practice and meets than he had previously experienced. He reported an urge to belch frequently and feelings of

abdominal fullness. When he tried to run, he reported difficulty breathing, and feeling excess gas in his stomach prohibited him from taking a full breath. He reported significant worry with insomnia and feeling “edgy” during the day. There was no history of alcohol or drug use and no previous psychiatric history. Further interview information was consistent with aerophagia and adjustment disorder with anxious mood. He was referred for relaxation training and brief psychotherapy to address his target anxiety symptoms. The therapy focused on reducing his fear of failing as a college athlete and reducing dysfunctional cognitions about his performance. The therapist advised the coaching staff that performance anxiety significantly contributed to the patient’s symptoms. Suggestions to reduce performance anxiety in this athlete were made to the coaching staff. Citalopram (Celexa), 20 mg, was prescribed. Over the next 6 weeks, the patient reported significant improvement in his breathing, feelings of fullness, anxiety, and sleep disturbance. His running began to improve, but had not yet returned to the expected level of performance. His coaches, however, were happy with his improvement and optimistic about his probability of eventually making a contribution to the team. (Courtesy of William R. Yates, M.D.) Extensive reports in the literature attest to the link between stress, anxiety, and physiological responsiveness of the GI system. Anxiety can produce disturbances in GI function through a central control mechanism or via humoral effects, such as the release of catecholamines. Electrical stimulation studies suggest that sympathetic autonomic responses can be generated in the lateral hypothalamus, a region with neural interactions within the limbic forebrain. Parasympathetic autonomic responses also influence GI function. Parasympathetic impulses originate in the periventricular and lateral hypothalamus and travel to the dorsal motor nucleus of the vagus, the main parasympathetic output pathway. The vagus is modulated by the limbic system linking an emotions-gut pathway of response. Acute stress can induce physiological responses in several GI target organs. In the esophagus, acute stress increases resting tone of the upper esophageal sphincter and increases contraction amplitude in the distal esophagus. Such physiological responses may result in symptoms that are consistent with globus or esophageal spasm syndrome. In the stomach, acute stress induces decreased antral motor activity, potentially producing functional nausea and vomiting. In the small intestine, reduced migrating motor function can occur, whereas in the large intestine, myoelectrical and motility activity can be increased under acute stress. These effects in the small and large intestine may be responsible for bowel symptoms associated with irritable bowel syndrome (IBS). Patients with contraction abnormalities and functional esophageal syndromes demonstrate high rates of psychiatric comorbidity. Functional esophageal symptoms include globus, dysphagia, chest pain, and regurgitation. Such symptoms can occur in conjunction with esophageal smooth muscle contraction abnormalities in the esophagus.

Not all patients with functional esophageal symptoms display contraction abnormalities. Anxiety disorders ranked highest in a study of psychiatric comorbidity in functional esophageal spasm, being present in 67 percent of subjects referred to a GI motility laboratory for testing. Generalized anxiety disorder topped the list of anxiety disorder diagnoses in this series. Many patients in this study had anxiety disorder symptoms before the onset of esophageal symptoms. This suggests that anxiety disorder may induce physiological changes in the esophagus that can produce functional esophageal symptoms. Peptic Ulcer Disease. Peptic ulcer refers to mucosal ulceration involving the distal stomach or proximal duodenum. Symptoms of peptic ulcer disease include a gnawing or burning epigastric pain that occurs 1 to 3 hours after meals and is relieved by food or antacids. Accompanying symptoms can include nausea, vomiting, dyspepsia, or signs of GI

bleeding, such as hematemesis or melena. Lesions generally are small, 1 cm or less in diameter. Early theories identified excess gastric acid secretion as the most important etiological factor. Infection with the bacteria *Helicobacter pylori* has been associated with 95 to 99 percent of duodenal ulcers and 70 to 90 percent of gastric ulcers. Antibiotic therapy that targets *H. pylori* results in much higher healing and cure rates than antacid and histamine blocker therapy. Early studies of peptic ulcer disease suggested a role of psychological factors in the production of ulcer vulnerability. This effect was believed to be mediated through the increased gastric acid excretion associated with psychological stress. Studies of prisoners of war during World War II documented rates of peptic ulcer formation twice as high as controls. Recent evidence for a primary role of *H. pylori* in peptic ulcer initiation suggests that psychosocial factors may play a primary role in the clinical expression of symptoms. Stressful life events may also reduce immune responses, resulting in a higher vulnerability to infection with *H. pylori*. No consensus exists on specific psychiatric disorders being related to peptic ulcer disease.

**Ulcerative Colitis.** Ulcerative colitis is an inflammatory bowel disease affecting primarily the large intestine. The cause of ulcerative colitis is unknown. The predominant symptom of ulcerative colitis is bloody diarrhea. Extracolonic manifestations can include uveitis, iritis, skin diseases, and primary sclerosing cholangitis. Diagnosis is made mainly by colonoscopy or proctoscopy. Surgical resection of portions of the large bowel or entire bowel can result in cure for some patients. For individual patients, psychiatric factors may play a key role in the presentation and complexity of the disorders such as ulcerative colitis. Some workers have reported an increased prevalence of dependent personalities in these patients. No generalizations about psychological mechanisms for ulcerative colitis can be made, however.

**Crohn's Disease.** Crohn's disease is an inflammatory bowel disease affecting primarily the small intestine and colon. Common symptoms in Crohn's disease include

diarrhea, abdominal pain, and weight loss. Because Crohn's disease is a chronic illness, most studies of psychiatric comorbidity focus on psychiatric disorders occurring after the onset of the disorder. A study of psychiatric symptoms in patients with Crohn's disease before the onset of symptoms found high rates (23 percent) of preexisting panic disorder compared with control subjects and subjects with ulcerative colitis. No statistically significant preexisting psychiatric comorbidity in ulcerative colitis occurred in this study. Longitudinal studies and careful retrospective studies in chronic GI disorders can be helpful in sorting out psychiatric disorder as a risk factor, consequence, or chance association with specific GI disorder.

**Psychotropic Drug Side Effects on Gastrointestinal Function.** Psychotropic drugs can produce significant changes in GI function, resulting in adverse effects. These GI adverse effects can produce several clinical challenges. First, patients may elect to discontinue necessary treatment because of the GI side effects. Second, prescribers may need to consider the possibility of serious GI illness or exacerbation of functional GI disturbances when drug-induced symptoms develop. Clinicians may need to carefully consider the side-effect profile of specific psychotropic drugs when treating patients with GI disorders.

Serotonin is found in the gut and the selective serotonin reuptake inhibitors (SSRIs) can produce significant GI symptoms. These GI adverse effects tend to be noted at the initiation of therapy and to be dose related, with higher doses producing higher rates of adverse effects. Nausea and diarrhea are significant adverse effects in the profile of the SSRI compounds. Standard tricyclic antidepressants (TCAs) can also produce GI effects, specifically, dry mouth and constipation. These effects appear to be primarily related to the anticholinergic effect of tricyclic compounds.

**Treatment PSYCHOTROPIC TREATMENT.** Psychotropic drug use is common in the treatment of a variety of GI disorders. Psychotropic drug treatment in patients with GI disease

is complicated by disturbances in gastric motility and absorption, and metabolism is related to the underlying GI disorder. Many GI effects of psychotropic drugs can be used for therapeutic effects with functional GI disorders. An example of a beneficial side effect would be using a TCA to reduce gastric motility in IBS with diarrhea. Psychotropic GI side effects, however, can exacerbate a GI disorder. An example of a potential adverse side effect would be prescribing a TCA to treat a depressed patient with gastroesophageal reflux. Psychotropic drug treatment is complicated by acute and chronic liver disease. Most of the psychotropic agents are metabolized by the liver. Many of these agents can be associated with hepatotoxicity. When acute changes in liver function tests occur with TCAs, carbamazepine (Tegretol), or the antipsychotics, it may be necessary to

discontinue the drugs. During periods of discontinuation, lorazepam (Ativan) or lithium (Eskalith) can be used, because they are excreted by the kidney. Electroconvulsive therapy (ECT) could also be used in the patient with liver disease, although the anesthesiologist needs to carefully choose anesthetic agents with minimal risk for hepatotoxicity. PSYCHOTHERAPY. Psychotherapy can be a key component in the stepped-care approach to the treatment of IBS and other functional GI disorders. Multiple different models of psychotherapy have been used. These include short-term, dynamically oriented, individual psychotherapy; supportive psychotherapy; hypnotherapy; relaxation techniques; and cognitive therapy. COMBINED PHARMACOTHERAPY AND PSYCHOTHERAPY MANAGEMENT. The combination of pharmacotherapy and psychotherapy is receiving increasing attention in effectiveness studies for a variety of disorders. Many GI disorders present opportunities for clinicians to consider combined therapy options. Because GI tolerability may be limited in these populations, psychotherapy augmentation strategies increase in importance. Cardiovascular Disorders Cardiovascular disorders are the leading cause of death in the United States and the industrialized world. Depression, anxiety, type A behavior, hostility, anger, and acute mental stress have been evaluated as risk factors for the development and expression of coronary disease. Negative affect in general, low socioeconomic status, and low social support have been shown to have significant relationships with each of these individual psychological factors, and some investigators have proposed these latter characteristics as more promising indices of psychological risk. Data from the Normative Aging Study on 498 men with a mean age of 60 years demonstrate a dose-response relationship between negative emotions, a combination of anxiety and depression symptoms, and the incidence of coronary disease. At present, however, the strongest evidence available pertains to depression. Studies of patients with preexisting coronary artery disease (CAD) also demonstrate a near doubling of risk for adverse coronary disease-related outcomes, including myocardial infarction (MI), revascularization procedures for unstable angina, and death, in association with depression. Severe depression 6 months after coronary artery bypass graft (CABG) surgery or persistence of even moderate depression symptoms beginning before surgery at 6-month postoperative follow-up predicts an increased risk of death over 5-year follow-up. Type A Behavior Pattern, Anger, and Hostility. The relationship between a behavior pattern characterized by easily aroused anger, impatience, aggression, competitive striving, and time urgency (type A) and CAD found the type A pattern to be associated with a nearly twofold increased risk of incident MI and CAD-related mortality. Group therapy to modify a type A behavior pattern was associated with

reduced reinfarction and mortality in a 4.5-year study of patients with prior MI. Type A behavior modification therapy has also been demonstrated to reduce episodes of silent ischemia seen on ambulatory electrocardiographic (ECG) monitoring. Hostility is a core component of the type A

concept. Low hostility is associated with low CAD risk in studies of workplace populations. High hostility is associated with increased risk of death in 16-year follow-up of survivors of a previous MI. In addition, hostility is associated with several physiological processes, which, in turn, are associated with CAD, such as reduced parasympathetic modulation of heart rate, increased circulating catecholamines, increased coronary calcification, and increased lipid levels during interpersonal conflict. Conversely, submissiveness has been found to be protective against CAD risk in women. Adrenergic receptor function is downregulated in hostile men, presumably an adaptive response to heightened sympathetic drive and chronic overproduction of catecholamines caused by chronic and frequent anger.

**Stress Management.** A recent meta-analysis of 23 randomized, controlled trials evaluated the additional impact of psychosocial treatment on rehabilitation from documented CAD. Relaxation training, stress management, and group social support were the predominant modalities of psychosocial intervention. Anxiety, depression, biological risk factors, mortality, and recurrent cardiac events were the clinical endpoints studied. These studies included a total of 2,024 patients in intervention groups and 1,156 control subjects. Patients having psychosocial treatment had greater reductions in emotional distress, systolic blood pressure, heart rate, and blood cholesterol level than comparison subjects. Patients who did not receive psychosocial intervention had 70 percent greater mortality and 84 percent higher cardiac recurrent event rates during 2 years of follow-up. Cardiac rehabilitation itself may reduce high levels of hostility, as well as anxiety and depression symptoms, in patients after MI. A meta-analytical review of psychoeducational programs for patients with CAD concluded that they led to a substantial improvement in blood pressure, cholesterol, body weight, smoking behavior, physical exercise, and eating habits and to a 29 percent reduction in MI and 34 percent reduction in mortality, without achieving significant effects on mood and anxiety. These programs included health education and stress management components.

**Cardiac Arrhythmias and Sudden Cardiac Death.** A comprehensive overview of cardiac arrhythmias is beyond the scope of this section. Among the many subtypes of cardiac arrhythmia, of greatest importance to psychiatrists are sinus node dysfunction and atrioventricular (AV) conduction disturbances resulting in bradyarrhythmias and tachyarrhythmias that may be lethal or symptomatic yet benign. Because autonomic cardiac modulation is profoundly sensitive to acute emotional stress, such as intense anger, fear, or sadness, it is not surprising that acute emotions can stimulate arrhythmias. Indeed, instances of sudden cardiac death related to sudden emotional distress have been noted throughout history in all cultures. Two studies have demonstrated that, in addition to depression, a high level of anxiety symptoms raises

the risk of further coronary events in patients after MI by two to five times that for nonanxious comparison patients. High anxiety symptom levels are associated with a tripling of risk of sudden cardiac death.

**Heart Transplantation.** Heart transplantation is available to approximately 2,500 patients annually in the United States. It provides approximately 75 percent 5-year survival for patients with severe heart failure, who would otherwise have a less than 50 percent 2-year survival. Candidates for heart transplantation typically experience a series of adaptive challenges as they proceed through the process of evaluation, waiting, perioperative management, postoperative recuperation, and long-term adaptation to life with a transplant. These stages of adaptation typically elicit anxiety, depression, elation, and working through of grief. Mood disorders are common in transplant recipients, in part because of chronic prednisone therapy.

**Hypertension.** Hypertension is a disease characterized by an elevated blood pressure of 140/90 mm Hg or above. It is primary (essential hypertension of unknown etiology) or secondary to a known medical illness.

Some patients have labile blood pressure (e.g., “white coat” hypertension, in which elevations occur only in a physician’s office and are related to anxiety). Personality profiles associated with essential hypertension include persons who have a general readiness to be aggressive, which they try to control, albeit unsuccessfully. The psychoanalyst Otto Fenichel observed that the increase in essential hypertension is probably connected to the mental situation of persons who have learned that aggressiveness is bad and must live in a world for which an enormous amount of aggressiveness is required.

**Vasovagal Syncope.** Vasovagal syncope is characterized by a sudden loss of consciousness (fainting) caused by a vasodepressor response decreasing cerebral perfusion. Sympathetic autonomic activity is inhibited, and parasympathetic vagal nerve activity is augmented; the result is decreased cardiac output, decreased vascular peripheral resistance, vasodilation, and bradycardia. This reaction decreases ventricular filling, lowers the blood supply to the brain, and leads to brain hypoxia and loss of consciousness. Because patients with vasomotor syncope normally put themselves, or fall into, a prone position, the decreased cardiac output is corrected. Raising the patient’s legs also helps correct the physiological imbalance. When syncope is related to orthostatic hypotension, as an adverse effect of psychotropic medication, patients should be advised to shift slowly from a sitting to a standing position. The specific physiological triggers of vasovagal syncope have not been identified, but acutely stressful situations are known etiological factors.

**Respiratory System** Psychological distress may become manifest in disrupted breathing, as in the tachypnea seen in anxiety disorders or sighing respirations in the depressed or anxious patient.

Disturbances of breathing can likewise perturb any sense of psychic calm, as in the terror of any asthma patient with severe airway obstruction or marked hypoxemia.

**Asthma.** Asthma is a chronic, episodic illness characterized by extensive narrowing of the tracheobronchial tree. Symptoms include coughing, wheezing, chest tightness, and dyspnea. Nocturnal symptoms and exacerbations are common. Although patients with asthma are characterized as having excessive dependency needs, no specific personality type has been identified; however, up to 30 percent of persons with asthma meet the criteria for panic disorder or agoraphobia. The fear of dyspnea can directly trigger asthma attacks, and high levels of anxiety are associated with increased rates of hospitalization and asthma-associated mortality. Certain personality traits in patients with asthma are associated with greater use of corticosteroids and bronchodilators and longer hospitalizations than would be predicted from pulmonary function alone. These traits include intense fear, emotional lability, sensitivity to rejection, and lack of persistence in difficult situations. Family members of patients with severe asthma tend to have higher than predicted prevalence rates of mood disorders, posttraumatic stress disorder, substance use, and antisocial personality disorder. How these conditions contribute to the genesis or maintenance of asthma in an individual patient is unknown. The familial and current social environment may interact with a genetic predisposition for asthma to influence the timing and severity of the clinical picture. This interaction may be especially insidious in adolescents whose need for, and fear of, emotional separation from the family often becomes entangled in battles over medication adherence as well as other modes of diligent self-care.

**Hyperventilation Syndrome.** Patients with hyperventilation syndrome breathe rapidly and deeply for several minutes, often unaware that they are doing so. They soon complain of feelings of suffocation, anxiety, giddiness, and lightheadedness. Tetany, palpitations, chronic pain, and paresthesias about the mouth and in the fingers and toes are associated symptoms. Finally, syncope may occur. The symptoms are caused by an excessive loss of CO<sub>2</sub> resulting in respiratory alkalosis. Cerebral vasoconstriction results from low cerebral tissue PCO<sub>2</sub>. The attack can be

aborted by having patients breathe into a paper (not plastic) bag or hold their breath for as long as possible, which raises the plasma PCO<sub>2</sub>. Another useful treatment technique is to have patients deliberately hyperventilate for 1 or 2 minutes and then describe the syndrome to them. This can also be reassuring to patients who fear they have a progressive, if not fatal, disease. Chronic Obstructive Pulmonary Disease. Chronic obstructive pulmonary disease (COPD) refers to a spectrum of disorders that are characterized by three pathophysiological aspects: (1) chronic cough and sputum production; (2) emphysema usually associated with smoking or  $\alpha$ 1-antitrypsin deficiency; and (3) inflammation, which produces fibrosis and narrowing of the airways. As for asthma, prevalence rates for panic disorder and anxiety disorders are increased among patients with COPD.

Anxiety disorders occur at rates of 16 to 34 percent, which are greater than the rate of 15 percent for the general population. Panic disorder prevalence rates among patients with COPD range from 8 to 24 percent, higher than the general prevalence of 1.5 percent. Patients with COPD can benefit from the use of inhaled sympathomimetic agents, but two points deserve emphasis. First, use of high doses can produce hypokalemia. Second, refractory symptoms can lead to the excessive use of oral  $\alpha$ 2-agonists, which have a high incidence of side effects, including tremor, anxiety, and interference with sleep. A 59-year-old female smoker with known COPD presented to the emergency room with chronic fatigue and dyspnea and an acute syndrome of depressed mood, suicidal ideation, and confusion. She lived alone and had exhausted her tank of supplemental oxygen that she only occasionally used at a low flow rate. One week earlier, to more aggressively treat the patient's worsened sputum production, her pulmonary physician had changed the oral corticosteroid to 10 mg dexamethasone (Decadron) per day from 10 mg prednisone per day. Arterial blood gases revealed moderate hypoxemia and hypercapnia and a chronic compensated respiratory acidosis—all essentially unchanged from previous studies. On examination, the patient appeared agitated and could not specify the date, the weekday, or her physician's name. The consulting psychiatrist considered delirium likely and ordered serum electrolytes, which yielded a blood glucose of 580 mg/dL. The psychiatrist made a diagnosis of organic mental disorder and secondary mood disturbance due to severe hyperglycemia. The change to a high-potency corticosteroid with intense glucocorticoid activity had provoked the massive rise in blood sugar and, in this elderly patient with poor oxygenation, resulted in delirium and a severe mood disturbance. The patient was admitted and treated for the hyperglycemia with intravenous (IV) saline and small doses of insulin. By the next day, her mental status had returned to normal, and the suicidal ideation and depressed mood had disappeared. (Courtesy of Michael G. Moran, M.D.)

**Endocrine System** An understanding of endocrine disorders is important, not only because they are widespread, but also because they can produce symptoms that are indistinguishable from psychiatric illnesses. Physical manifestations of endocrine disease provide clues to the diagnosis but are not always present. The effect of endocrinopathies on psychiatric symptomatology has been studied, particularly for disorders of the thyroid and adrenal glands. Less is known about psychiatric sequelae of other endocrine disorders, such as reproductive disturbances, acromegaly, prolactin (PRL)-secreting tumors, and hyperparathyroidism.

**Hyperthyroidism.** Hyperthyroidism, or thyrotoxicosis, results from overproduction of thyroid hormone by the thyroid gland. The most common cause is exophthalmic goiter, also called Graves' disease (see Color Plate 13.5-1). Toxic nodular goiter causes another 10 percent of cases among middle-aged and elderly patients. Physical signs of hyperthyroidism include increased pulse,

arrhythmias, elevated blood pressure, fine tremor, heat intolerance, excessive sweating, weight loss, tachycardia, menstrual irregularities, muscle weakness, and exophthalmos. Psychiatric features include nervousness, fatigue, insomnia, mood lability, and dysphoria. Speech may be pressured, and patients may exhibit a heightened activity level. Cognitive symptoms include a short attention span, impaired recent memory, and an exaggerated startle response. Patients with severe hyperthyroidism may exhibit visual hallucinations, paranoid ideation, and delirium. Although some symptoms of hyperthyroidism resemble those of a manic episode, an association between hyperthyroidism and mania has rarely been observed; however, both disorders may exist in the same patient. Treatments for Graves' disease are (1) propylthiouracil (PTU) and antithyroid drugs, (2) radioactive iodine (RAI), and (3) surgical thyroidectomy.  $\beta$ -Adrenergic receptor antagonists (e.g., propranolol [Inderal]) can provide symptomatic relief. Treatment of thyroid nodular goiter consists of  $\beta$ -adrenergic receptor antagonists and RAI. Treatment of thyroiditis consists of a brief course (a few weeks) of  $\beta$ -adrenergic receptor antagonists, because this condition is short-lived. For patients with psychotic symptoms, medium-potency antipsychotics are preferable to low-potency drugs, because the latter can worsen tachycardia. Tricyclic drugs should be used with caution, if at all, for the same reason. Depressed patients often respond to SSRIs. In general, the psychiatric symptoms resolve with successful treatment of the hyperthyroidism. Hypothyroidism. Hypothyroidism results from inadequate synthesis of thyroid hormone and is categorized as either overt or subclinical. In overt hypothyroidism, thyroid hormone concentrations are abnormally low, thyroid-stimulating hormone (TSH) levels are elevated, and patients are symptomatic; in subclinical hypothyroidism, patients have normal thyroid hormone concentrations but elevated TSH levels. Psychiatric symptoms of hypothyroidism include depressed mood, apathy, impaired memory, and other cognitive defects. Also, hypothyroidism can contribute to treatment-refractory depression. A psychotic syndrome of auditory hallucinations and paranoia, myxedema madness, has been described in some patients. Urgent psychiatric treatment is necessary for patients presenting with severe psychiatric symptoms (e.g., psychosis or suicidal depression). Psychotropic agents should be given at low doses initially, because the reduced metabolic rate of patients with hypothyroidism may reduce breakdown and result in higher concentrations of medications in blood. SUBCLINICAL HYPOTHYROIDISM. Subclinical hypothyroidism can produce depressive symptoms and cognitive deficits, although they are less severe than those produced by overt hypothyroidism. The lifetime prevalence of depression in patients with subclinical hypothyroidism is approximately double that in the general population. These patients

display a lower response rate to antidepressants and a greater likelihood of responding to liothyronine (Cytomel) augmentation than euthyroid patients with depression. Diabetes Mellitus. Diabetes mellitus is a disorder of metabolism and the vascular system, manifested by disturbances in the body's handling of glucose, lipids, and protein. It results from impaired insulin secretion or action. It is also a serious long-term side effect of serotonin-dopamine antagonist drugs (SDAs) used to treat psychosis. Heredity and family history are important in the onset of diabetes; however, sudden onset is often associated with emotional stress, which disturbs the homeostatic balance in persons who are predisposed to the disorder. Psychological factors that seem significant are those provoking feelings of frustration, loneliness, and dejection. Patients with diabetes must usually maintain some dietary control over their diabetes. When they are depressed and dejected, they often overeat or overdrink self-destructively and cause their diabetes to get out of control. This reaction is especially common in patients with juvenile, or type 1, diabetes. Terms such as oral, dependent, seeking maternal attention, and excessively passive have been applied to persons

with this condition. Supportive psychotherapy helps achieve cooperation in the medical management of this complex disease. Therapists should encourage patients to lead as normal a life as possible, recognizing that they have a chronic but manageable disease. In patients with known diabetes, ketoacidosis can produce some violence and confusion. More commonly, hypoglycemia (often occurring when a patient with diabetes drinks alcohol) can produce severe anxiety states, confusion, and disturbed behavior. Inappropriate behavior caused by hypoglycemia must be distinguished from that caused by simple drunkenness. Adrenal Disorders Cushing's Syndrome. Spontaneous Cushing's syndrome results from adrenocortical hyperfunction and can develop from either excessive secretion of ACTH (which stimulates the adrenal gland to produce cortisol) or from adrenal pathology (e.g., a cortisol-producing adrenal tumor). Cushing's disease, the most common form of spontaneous Cushing's syndrome, results from excessive pituitary secretion of ACTH, usually from a pituitary adenoma. The clinical features of Cushing's disease include a characteristic "moon facies," or rounded face, from accumulation of adipose tissue around the zygomatic arch. Truncal obesity, a "buffalo hump" appearance, results from cervicodorsal adipose tissue deposition. The catabolic effects of cortisol on protein produce muscle wasting, slow wound healing, easy bruising, and thinning of the skin, leading to abdominal striae (Fig. 13.5-2). Bones become osteoporotic, sometimes resulting in pathological fractures and loss of height. Psychiatric symptoms are common and vary from severe depression to elation with or without evidence of psychotic features.

FIGURE 13.5-2 Cushing's syndrome. Legs thin owing to atrophy of thigh muscles. Some abdominal obesity with marked striae. (From Douithwaite AH, ed. Fench's Index of Differential Diagnosis. 7th ed. Baltimore: Williams & Wilkins; 1954, with permission.) The treatment of pituitary ACTH-producing tumors involves surgical resection or pituitary irradiation. Medications that antagonize cortisol production (e.g., metyrapone [Metopirone]) or suppress ACTH (e.g., serotonin antagonists such as cyproheptadine [Periactin]) are sometimes used but have met with limited success. Hypercortisolism. Psychiatric symptoms are myriad. Most patients experience fatigue and approximately 75 percent report depressed mood. Of these, approximately 60 percent experience moderate or severe depression. Depression severity does not appear to be influenced by the etiology underlying the Cushing's syndrome. Depressive symptoms occur more commonly in female patients than in male patients with Cushing's syndrome. Emotional lability, irritability, decreased libido, anxiety, and hypersensitivity to stimuli are common. Somatic symptoms and elevated neuroticism scores on the Eysenck Personality Inventory have also been reported, with significant improvement after normalization of cortisol levels. Social withdrawal may develop as a result of shame regarding one's physical appearance. Paranoia, hallucinations, and depersonalization are estimated to occur in 5 to 15 percent of cases. Cognitive changes are common, with approximately 83 percent of patients experiencing deficits in concentration and memory. The severity of these deficits correlates with plasma cortisol and ACTH levels. Manic and psychotic symptoms occur much less frequently than depression, at a rate

of approximately 3 to 8 percent of patients, but rising to as high as 40 percent in patients with adrenal carcinomas. In cases of iatrogenic hypercortisolism and adrenal carcinomas, however, mania and psychosis may predominate. The psychiatric disturbances in prednisone-treated patients tend to appear within the first 2 weeks of treatment and occur more commonly in women than in men. The withdrawal of steroids can also produce psychiatric disturbances, particularly depression, weakness, anorexia, and arthralgia. Other steroid-induced withdrawal symptoms

include emotional lability, memory impairment, and delirium. Withdrawal symptoms have been noted to persist for as long as 8 weeks after corticosteroid withdrawal. Patients presenting with mood lability or depression in association with muscle weakness, obesity, diabetes, easy bruising, cutaneous striae, acne, hypertension, and, in women, hirsutism and oligomenorrhea or amenorrhea benefit from an endocrinological evaluation. Hyperprolactinemia. Prolactin, produced by the anterior pituitary, stimulates milk production from the breast and modulates maternal behavior. Its production is inhibited by dopamine (also known as prolactin-inhibiting factor) produced by the tuberoinfundibular neurons of the arcuate nucleus of the hypothalamus. Normal concentrations (5 to 25 ng/mL in women and 5 to 15 ng/mL in men) fluctuate during the day, peaking during sleep. Exercise and emotional stress can increase prolactin concentration. Medications that block dopamine action (e.g., antipsychotics) raise prolactin concentrations up to 20 times. All antipsychotics appear equally likely to raise prolactin concentrations, with the exception of clozapine (Clozaril) and olanzapine (Zyprexa). Other medications that may increase prolactin concentrations include oral contraceptives, estrogens, tricyclic drugs, serotonergic antidepressants, and propranolol. Hypothyroidism raises prolactin concentration because thyrotropin-releasing hormone (TRH) stimulates prolactin release. Physiological hyperprolactinemia occurs in pregnant and breast-feeding women; nipple stimulation also increases prolactin concentrations. Traumatic childhood experiences, such as separation from parents or living with an alcoholic father, have been reported to predispose to hyperprolactinemia. Stressful life events are also associated with galactorrhea, even in the absence of increased prolactin concentrations. Low prolactin levels are associated with decreased libido. Hyperprolactinemia can cause sexual dysfunction, such as erectile disorder and anorgasmia. Skin Disorders Psychocutaneous disorders encompass a wide variety of dermatological diseases that may be affected by the presence of psychiatric symptoms or stress and psychiatric illnesses in which the skin is the target of disordered thinking, behavior, or perception. Although the link between stress and several dermatological disorders has been suspected for years, few well-controlled studies of treatments of dermatological

disorders have assessed whether stress reduction or treatment of psychiatric comorbidity improves their outcome. Although evidence of interactions between the nervous, immune, and endocrine systems has improved the understanding of psychocutaneous disorders, more study of these often disabling disorders and their treatment is needed. Atopic Dermatitis. Atopic dermatitis (also called atopic eczema or neurodermatitis) is a chronic skin disorder characterized by pruritus and inflammation (eczema), which often begins as an erythematous, pruritic, maculopapular eruption. Patients with atopic dermatitis tend to be more anxious and depressed than clinical and disease-free control groups. Anxiety or depression exacerbates atopic dermatitis by eliciting scratching behavior, and depressive symptoms appear to amplify the itch perception. Studies of children with atopic dermatitis found that those with behavior problems had more severe illness. In families that encouraged independence, children had less severe symptoms, whereas parental overprotectiveness reinforced scratching. Psoriasis. Psoriasis is a chronic, relapsing disease of the skin, with lesions characterized by silvery scales with a glossy, homogeneous erythema under the scales. It is difficult to control the adverse effect of psoriasis on quality of life. It can lead to stress that, in turn, can trigger more psoriasis. Patients who report that stress triggered psoriasis often describe disease-related stress resulting from the cosmetic disfigurement and social stigma of psoriasis, rather than stressful major life events. Psoriasis-related stress may have more to do with psychosocial difficulties inherent in the interpersonal relationships of patients with psoriasis than with the severity or chronicity of psoriasis activity. Controlled studies have found that patients with

psoriasis have high levels of anxiety and depression and significant comorbidity with a wide array of personality disorders including schizoid, avoidant, passive-aggressive, and obsessive-compulsive personality disorders. Patients' self-report of psoriasis severity correlated directly with depression and suicidal ideation, and comorbid depression reduced the threshold for pruritus in patients with psoriasis. Heavy alcohol consumption (more than 80 g of ethanol daily) by male patients with psoriasis may predict a poor treatment outcome. Psychogenic Excoriation. Psychogenic excoriations (also called psychogenic pruritus) are lesions caused by scratching or picking in response to an itch or other skin sensation or because of an urge to remove an irregularity on the skin from preexisting dermatoses, such as acne. Lesions are typically found in areas that the patient can easily reach (e.g., the face, upper back, and the upper and lower extremities) and are a few millimeters in diameter and weeping, crusted, or scarred, with occasional postinflammatory hypopigmentation or hyperpigmentation. The behavior in psychogenic excoriation sometimes resembles obsessive-compulsive disorder in that it is repetitive, ritualistic, and tension reducing, and patients attempt (often unsuccessfully) to resist excoriating. The skin is an important erogenous zone, and Freud believed it susceptible to unconscious sexual impulses.

Localized Pruritus PRURITUS ANI. The investigation of pruritus ani commonly yields a history of local irritation (e.g., threadworms, irritant discharge, fungal infection) or general systemic factors (e.g., nutritional deficiencies, drug intoxication). After running a conventional course, however, pruritus ani often fails to respond to therapeutic measures and acquires a life of its own, apparently perpetuated by scratching and superimposed inflammation. It is a distressing complaint that often interferes with work and social activity. Investigation of many patients with the disorder has revealed that personality deviations often precede the condition and that emotional disturbances often precipitate and maintain it. PRURITUS VULVAE. As with pruritus ani, specific physical causes, either localized or generalized, may be demonstrable in pruritus vulvae, and the presence of glaring psychopathology in no way lessens the need for adequate medical investigation. In some patients, pleasure derived from rubbing and scratching is conscious—they realize it is a symbolic form of masturbation—but more often than not, the pleasure element is repressed. Some patients may give a long history of sexual frustration, which was frequently intensified at the time of the onset of the pruritus. Hyperhidrosis. States of fear, rage, and tension can induce increased sweat secretion that appears primarily on the palms, the soles, and the axillae. The sensitivity of sweating in response to emotion serves as the basis for measurement of sweat by the galvanic skin response (an important tool of psychosomatic research), biofeedback, and the polygraph (lie detector test). Under conditions of prolonged emotional stress, excessive sweating (hyperhidrosis) can lead to secondary skin changes, rashes, blisters, and infections; therefore, hyperhidrosis may underlie several other dermatological conditions that are not primarily related to emotions. Basically, hyperhidrosis can be viewed as an anxiety phenomenon mediated by the autonomic nervous system, and it must be differentiated from drug-induced states of hyperhidrosis. Urticaria. Psychiatric factors have been implicated in the development of some types of urticaria. Most psychiatric studies have focused on chronic idiopathic urticaria. Early psychodynamic theories about urticaria have been abandoned because no association between a specific personality conflict and urticaria could be proved. Patients with chronic idiopathic urticaria are frequently depressed and anxious, however, and women are more likely to experience significant psychiatric symptoms. Whether the psychiatric symptoms resulted from urticaria or were a contributing causal factor in its development or exacerbation is unclear, however. Controlled studies found an association between stressful life events and the onset of urticaria. Stress can lead to the secretion

of such neuropeptides as vasoactive intestinal peptide and substance P, which can cause vasodilation and contribute to the development of urticarial wheals.

**Musculoskeletal System** The musculoskeletal disorders are a diverse group of syndromes and diseases that have the presence of muscle and joint symptoms as their common denominator. The relevance of these disorders to the psychiatrist is the consistently observed correlation with psychiatric illness. Many patients with a musculoskeletal disorder exhibit additional symptoms and signs suggesting the presence of an accompanying psychiatric disorder. These comorbid psychiatric conditions may be a result of the patient's psychological response to the loss and discomfort imposed by the disease or may be produced by the effect of the disease process on the central nervous system (CNS).

**Rheumatoid Arthritis.** Rheumatoid arthritis is a disease characterized by chronic musculoskeletal pain arising from inflammation of the joints. The disorder's significant causative factors are hereditary, allergic, immunological, and psychological. Stress can predispose patients to rheumatoid arthritis and other autoimmune diseases by immune suppression. Depression is comorbid with rheumatoid arthritis in about 20 percent of individuals. Those who get depressed are more likely to be unmarried, have a longer duration of illness, and have a higher occurrence of medical comorbidity. Individuals with rheumatoid arthritis and depression commonly demonstrate poorer functional status, and they report more often painful joints, pronounced experience of pain, health care use, bed days, and inability to work than do patients with similar objective measures of arthritic activity without depression. Psychotropic agents may be of use in some patients. Sleep, which is often disrupted by pain, can be assisted by the combination of a nonsteroidal anti-inflammatory drug (NSAID) and trazodone (Desyrel) or mirtazapine (Remeron), with appropriate cautionary advice regarding orthostatic hypotension. Tricyclic drugs exert mild antiinflammatory effects independent of their mood-altering benefit; however, anticholinergic effects (prominent among the tricyclic drugs and also present with some serotonergic agents) can aggravate dry oral and ocular membranes in some patients with the disorder.

**Systemic Lupus Erythematosus.** Systemic lupus erythematosus is a connective tissue disease of unclear etiology, characterized by recurrent episodes of destructive inflammation of several organs, including the skin, joints, kidneys, blood vessels, and CNS. This disorder is highly unpredictable, often incapacitating, and potentially disfiguring, and its treatment requires administration of potentially toxic drugs. The psychiatrist can assist in promoting positive interactions between patients and the program staff and ensuring a tolerant attitude on the part of these staff members. Supportive psychotherapy can help patients acquire the knowledge and maturity necessary to deal with the disorder as effectively as possible.

**Low Back Pain.** Low back pain affects almost 15 million Americans and is one of the major reasons for days lost from work and for disability claims paid to workers by

insurance companies. Signs and symptoms vary from patient to patient, most often consisting of excruciating pain, restricted movement, paresthesias, and weakness or numbness, all of which may be accompanied by anxiety, fear, or even panic. The areas most affected are the lower lumbar, lumbosacral, and sacroiliac regions. It is often accompanied by sciatica, with pain radiating down one or both buttocks or following the distribution of the sciatic nerve. Although low back pain can be caused by a ruptured intervertebral disk, a fracture of the back, congenital defects of the lower spine, or a ligamentous muscle strain, many instances are psychosomatic. Examining physicians should be particularly alert to patients who give a history of minor back trauma followed by severe disabling pain. Patients with low back pain often report that the pain began at a time of

psychological trauma or stress, but others (perhaps 50 percent) develop pain gradually over a period of months. Patients' reaction to the pain is disproportionately emotional, with excessive anxiety and depression. Furthermore, the pain distribution rarely follows a normal neuroanatomical distribution and may vary in location and intensity. Treatment includes educating patients about the physiological component (vasospasm) and helping them understand the working of the unconscious mind and conflicts that arise from unconscious affects, especially that of rage. The patient understands that the mind is substituting physical pain for emotional pain so that the conscious mind does not have to deal with conflict. Physical activity should be resumed as quickly as possible, with treatments such as spinal manipulation and mandatory physical therapy sessions used minimally if at all.

**Fibromyalgia.** Fibromyalgia is characterized by pain and stiffness of the soft tissues, such as muscles, ligaments, and tendons. Local areas of tenderness are referred to as "trigger points." The cervical and thoracic areas are affected most often, but the pain may be located in the arms, shoulders, low back, or legs. It is more common in women than in men. The etiology is unknown; however, it is often precipitated by stress that causes localized arterial spasm that interferes with perfusion of oxygen in the affected areas. Pain results, with associated symptoms of anxiety, fatigue, and inability to sleep because of the pain. There are no pathognomonic laboratory findings. The diagnosis is made after excluding rheumatic disease or hypothyroidism. Fibromyalgia is often present in chronic fatigue syndrome and depressive disorders. Analgesics, such as aspirin and acetaminophen, are useful for pain. Narcotics should be avoided. Some patients may respond to NSAIDs. Patients with more severe cases may respond to injections of an anesthetic (e.g., procaine) into the affected area; steroid injections are usually unwarranted. The relation between stress, spasms, and pain should be explained. Relaxation exercises and massage of the trigger points may also be of use. Antidepressants, especially sertraline (Zoloft), have shown encouraging results. Psychotherapy may be warranted for patients who are able to gain insight into the nature of the disorder and also to help them identify and deal with psychosocial stressors.

**Headaches** Headaches are the most common neurological symptom and one of the most common medical complaints. Every year about 80 percent of the population has at least one headache, and 10 to 20 percent go to physicians with headache as their primary complaint. Headaches are also a major cause of absenteeism from work and avoidance of social and personal activities. Most headaches are not associated with significant organic disease; many persons are susceptible to headaches at times of emotional stress. Moreover, in many psychiatric disorders, including anxiety and depressive disorders, headache is frequently a prominent symptom. Patients with headaches are often referred to psychiatrists by primary care physicians and neurologists after extensive biomedical workups, which often include magnetic resonance imaging (MRI) of the head. Most workups for common headache complaints have negative findings, and such results may be frustrating for both patient and physician. Physicians not well versed in psychological medicine may attempt to reassure such patients by telling them that they have no disease. But this reassurance may have the opposite effect—it may increase patients' anxiety and even escalate into a disagreement about whether the pain is real or imagined. Psychological stress usually exacerbates headaches, whether their primary underlying cause is physical or psychological.

**Migraine (Vascular) and Cluster Headaches.** Migraine (vascular) headache is a paroxysmal disorder characterized by recurrent unilateral headaches, with or without related visual and gastrointestinal disturbances (e.g., nausea, vomiting, and photophobia). They are probably caused by a functional disturbance in the cranial circulation. Migraines can be precipitated by cycling estrogen, which may

account for their higher prevalence in women. Stress is also a precipitant, and many persons with migraine are overly controlled, perfectionists, and unable to suppress anger. Cluster headaches are related to migraines. They are unilateral, occur up to eight times a day, and are associated with miosis, ptosis, and diaphoresis. Migraines and cluster headaches are best treated during the prodromal period with ergotamine tartrate (Cafergot) and analgesics. Prophylactic administration of propranolol or verapamil (Isoptin) is useful when the headaches are frequent. Sumatriptan (Imitrex) is indicated for the short-term treatment of migraine and can abort attacks. SSRIs are also useful for prophylaxis. Psychotherapy to diminish the effects of conflict and stress and certain behavioral techniques (e.g., biofeedback) have been reported to be useful. Tension (Muscle Contraction) Headaches. Emotional stress is often associated with prolonged contraction of head and neck muscles, which over several hours may constrict the blood vessels and result in ischemia. A dull, aching pain, sometimes feeling like a tightening band, often begins suboccipitally and may spread over the head. The scalp may be tender to the touch and, in contrast to a migraine, the

headache is usually bilateral and not associated with prodromata, nausea, or vomiting. Tension headaches may be episodic or chronic and need to be differentiated from migraine headaches, especially with and without aura. Tension headaches are frequently associated with anxiety and depression and occur to some degree in about 80 percent of persons during periods of emotional stress. Tense, high-strung, competitive personalities are especially susceptible to the disorder. In the initial stage, persons may be treated with antianxiety agents, muscle relaxants, and massage or heat application to the head and neck; antidepressants may be prescribed when an underlying depression is present. Psychotherapy is an effective treatment for persons chronically afflicted by tension headaches. Learning to avoid or cope better with tension is the most effective long-term management approach. Biofeedback using electromyogram (EMG) feedback from the frontal or temporal muscles may help some patients. Relaxation exercises and meditation also benefit some patients. TREATMENT OF PSYCHOSOMATIC DISORDERS A major role of psychiatrists and other physicians working with patients with psychosomatic disorders is mobilizing the patient to change behavior in ways that optimize the process of healing. This may require a general change in lifestyle (e.g., taking vacations) or a more specific behavioral change (e.g., giving up smoking). Whether or not this occurs depends in large measure on the quality of the relationship between doctor and patient. Failure of the physician to establish good rapport accounts for much of the ineffectiveness in getting patients to change. Ideally, both physician and patient collaborate and decide on a course of action. At times this may resemble a negotiation in which doctor and patient discuss various options and reach a compromise about an agreed-upon goal. Stress Management and Relaxation Therapy Cognitive-behavioral therapy methods are increasingly used to help individuals better manage their responses to stressful life events. These treatment methods are based on the notion that cognitive appraisals about stressful events and the coping efforts related to these appraisals play a major role in determining stress responding. Cognitive-behavioral therapy approaches to stress management have three major aims: (1) to help individuals become more aware of their own cognitive appraisals of stressful events, (2) to educate individuals about how their appraisals of stressful events can influence negative emotional and behavioral responses and to help them reconceptualize their abilities to alter these appraisals, and (3) to teach individuals how to develop and maintain the use of a variety of effective cognitive and behavioral stress management skills. Stress-Management Training. Five skills form the core of almost all stress-management programs: self-observation, cognitive restructuring, relaxation training, time management, and problem-solving.

**SELF-OBSERVATION.** A daily diary format is used, with patients being asked to keep a record of how they responded to challenging or stressful events that occurred each day. A particular stress (e.g., argument with spouse) may precipitate a sign or symptom (e.g., pain in the neck). **COGNITIVE RESTRUCTURING.** This helps participants become aware of, and change, their maladaptive thoughts, beliefs, and expectations. Patients are taught to substitute negative assumptions with positive assumptions. **RELAXATION EXERCISES.** Edmund Jacobson in 1938 developed a method called progressive muscle relaxation to teach relaxation without using instrumentation as is used in biofeedback. Patients were taught to relax muscle groups, such as those involved in “tension headaches.” When they encountered, and were aware of, situations that caused tension in their muscles, the patients were trained to relax. This method is a type of systematic desensitization—a type of behavior therapy. **Hypnosis.** Hypnosis is effective in smoking cessation and dietary change augmentation. It is used in combination with aversive imagery (e.g., cigarettes taste obnoxious). Some patients exhibit a moderately high relapse rate and may require repeated programs of hypnotic therapy (usually three to four sessions). **Biofeedback.** Neal Miller in 1969 published his pioneering paper “Learning of Visceral and Glandular Responses,” in which he reported that, in animals, various visceral responses regulated by the involuntary autonomic nervous system could be modified by learning operant conditioning carried out in the laboratory. This led to humans being able to learn to control certain involuntary physiological responses (called biofeedback) such as blood vessel vasoconstriction, cardiac rhythm, and heart rate. These physiological changes seem to play a significant role in the development and treatment or cure of certain psychosomatic disorders. Biofeedback and related techniques have been useful in tension headaches, migraine headaches, and Raynaud’s disease. Although biofeedback techniques initially produced encouraging results in treating essential hypertension, relaxation therapy has produced more significant long-term effects than biofeedback. **TIME MANAGEMENT.** Time-management methods are designed to help individuals restore a sense of balance to their lives. The first step in training in time-management skills is designed to enhance awareness of current patterns of time use. To accomplish this goal, individuals might be asked to keep a record of how they spend their time each day, noting the amount of time spent in important categories, such as work, family, exercise, or leisure activities. Alternatively, they may be asked to list the important areas in their lives and then asked to provide two time estimates: (1) the amount of time they currently spend engaging in these activities and (2) the amount of time they would like to spend engaging in these activities. Frequently, a substantial difference is seen in the time individuals would like to spend on important activities and the amount of time they actually spend on such activities. With awareness of this difference comes increased

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motivation to make changes. PROBLEM-SOLVING. The final step is problem-solving, in which patients try to apply the best solution to the problem situation and then review their progress with the therapist. REFERENCES Calvillo-King L, Arnold D, Eubank KJ, Lo M, Yunyongying P, Halm EA. Impact of social factors on risk of readmission or mortality in pneumonia and heart failure: systematic review. *J Gen Intern Med.* 2013;28(2):269–282. Creed F. Gastrointestinal disorders. In: Sadock BJ, Sadock VA, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry.* 9th ed. Vol. 2. Philadelphia: Lippincott Williams & Wilkins; 2009:2263. Desan P. Psychosomatic medicine revisited. *Primary Psychiatry.* 2005;12:35. Drossman DA, Toner BB, Whitehead WE, Diamant NE, Dalton CB, Duncan S, Emmott S, Proffitt V, Akman D, Frusciante K, Le T, Meyer K, Bradshaw B, Mikula K, Morris CB, Blackman CJ, Hu Y, Jia H, Li JZ, Koch GG, Bangdiwala SI. Cognitivebehavioral therapy versus education and desipramine versus placebo for moderate to severe functional bowel disorders. *Gastroenterology.* 2003;125:19. Enck P, Bingel U, Schedlowski M, Rief W. The placebo response in medicine: Minimize, maximize or personalize? *Nat Rev Drug Discov.* 2013;12(3):191–204. Guidi J, Rafanelli C, Roncuzzi R, Sirri L, Fava GA. Assessing psychological factors affecting medical conditions: Comparison between different proposals. *Gen Hosp Psychiatry.* 2013;35(2):141–146. Halder SL, Locke GR 3rd, Talley NJ, Fett SL, Zinsmeister AR, Melton LJ 3rd. Impact of functional gastrointestinal disorders on health-related quality of life: A population-based case-control study. *Aliment Pharmacol Ther.* 2004;19:233. Holwerda TJ, Deeg DJ, Beekman AT, van Tilburg TG, Stek ML, Jonker C, Schoevers RA. Feelings of loneliness, but not social isolation, predict dementia onset: results from the Amsterdam Study of the Elderly (AMSTEL). *J Neurol Neurosurg Psychiatry.* 2014;85(2):135–142. Maeda U, Shen BJ, Schwarz ER, Farrell KA, Mallon S. Self-efficacy mediates the associations of social support and depression with treatment adherence in heart failure patients. *Int J Behav Med.* 2013;20(1):88–96. McLean DE, Bowen S, Drezner K, Rowe A, Sherman P, Schroeder S, Redlener K. Asthma among homeless children: Undercounting and undertreating the underserved. *Arch Pediatr Adolesc Med.* 2004;158:244–249. Moran MG. Respiratory disorders. In: Sadock BJ, Sadock VA, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry.* 9th ed. Vol. 2. Philadelphia: Lippincott Williams & Wilkins; 2009:2289. Poricelli P, Affatati V, Bellomo A, De Carne M, Todarello O, Taylor GJ. Alexithymia and psychopathology in patients with psychiatric and functional gastrointestinal disorders. *Psychother Psychosom.* 2004;73:84. Rietveld S, Creer TL. Psychiatric factors in asthma: Implications for diagnosis and therapy. *Am J Respir Med.* 2004;2:1–10. Shapiro PA, Lawson RW. Cardiovascular disorders. In: Sadock BJ, Sadock VA, eds. *Kaplan & Sadock's Comprehensive Textbook of Psychiatry.* 9th ed. Vol. 2. Philadelphia: Lippincott Williams & Wilkins; 2009:2250. Singh JA, Lewallen DG. Medical and psychological comorbidity predicts poor pain outcomes after total knee arthroplasty. *Rheumatology.* 2013;52(5):916–923. Smith TW. Hostility and health: Current status of psychosomatic hypothesis. In: Salovey P, Rothman AJ, eds. *Social Psychology of Health.* New York:

Patients with factitious disorder simulate, induce, or aggravate illness to receive medical attention, regardless of whether or not they are ill. Thus, they may inflict painful, deforming, or even life-threatening injury on themselves, their children, or other dependents. The primary motivation is not avoidance of duties, financial gain, or anything concrete. The motivation is simply to receive medical care and to partake in the medical system. Factitious disorders can lead to significant morbidity or even mortality. Therefore, even though presenting complaints are falsified, the medical and psychiatric needs of these patients must be taken seriously. For example, an operating room technician, the daughter of a physician, repetitively injected herself with *Pseudomonas*, which caused multiple bouts of sepsis and bilateral renal failure that led to her death. Such deaths are not uncommon. In a 1951 article in *Lancet*, Richard Asher coined the term “Munchausen syndrome” to refer to a syndrome in which patients embellish their personal history, chronically fabricate symptoms to gain hospital admission, and move from hospital to hospital. The syndrome was named after Baron Hieronymus Friedrich Freiherr von Munchausen (1720–1797), a German cavalry officer (Fig. 13.6-1). FIGURE 13.6-1 The Baron Karl Friedrich Hieronymus von Münchhausen (1720–1797). Left: The Baron wears military armor in this 1750 portrait by G. Bruckner. A nobleman who served the Russian army in the war against the Turks, the baron entertained friends with embellished stories of his war adventures in his retirement. His tales gained fame when published by Rudolph E. Raspe. Right: The baron appears as a caricature in this drawing by 19th-century artist Gustave Doré. Like the baron, patients with factitious disorders are real persons deserving of respect, even though they often present themselves as caricatures. (Portrait courtesy of Bernhard Wiebel, <http://www.Muenchhausen.ch>. The actual portrait was lost in World War II. Caricature from Gustave Doré. *The Adventures of Baron Munchausen, One Hundred and Sixty Illustrations* by Gustave Doré. New York: Pantheon Books; 1944.)

**EPIDEMIOLOGY** No comprehensive epidemiological data on factitious disorder exist. Limited studies indicate that patients with factitious disorder may comprise approximately 0.8 to 1.0 percent of psychiatry consultation patients. Cases of feigned psychological signs and symptoms are reported much less commonly than those of physical signs and symptoms. A data bank of persons who feign illness has been established to alert hospitals about such patients, many of whom travel from place to place, seek admission under different names, or simulate different illnesses. Approximately two thirds of patients with Munchausen syndrome are male. They tend to be white, middle-aged, unemployed, unmarried, and without significant social or family attachments. Patients diagnosed with factitious disorders with physical signs and symptoms are mostly women, who outnumber men 3 to 1. They are usually 20 to 40 years of age with a history of employment or education in nursing or a health care occupation. Factitious physical disorders usually begin for patients in their 20s or 30s, although the literature contains cases ranging from 4 to 79 years of age. Factitious disorder by proxy (called factitious disorder imposed on another in the fifth edition of *Diagnostic and Statistical Manual of Mental Disorders [DSM-5]*) is most commonly perpetrated by mothers against infants or young children. Rare or underrecognized, it accounts for less than 0.04 percent, or 1,000 of 3 million cases of child abuse reported in the United States each year. Good epidemiological data are lacking, however. This disorder is discussed below.

**COMORBIDITY** Many persons diagnosed with factitious disorder have comorbid psychiatric diagnoses (e.g., mood disorders, personality disorders, or substance-related disorders).

**ETIOLOGY** Psychosocial Factors The psychodynamic underpinnings of factitious disorders are poorly understood because the

patients are difficult to engage in an exploratory psychotherapy process. They may insist that their symptoms are physical and that psychologically oriented treatment is therefore useless. Anecdotal case reports indicate that many of the patients suffered childhood abuse or deprivation, resulting in frequent hospitalizations during early development. In such circumstances, an inpatient stay may have been regarded as an escape from a traumatic home situation, and the patient may have found a series of caretakers (e.g., doctors, nurses, and hospital workers) to be loving and caring. In contrast, the patients' families of origin included a rejecting mother or an absent father. The usual history reveals that the patient perceives one or both parents as rejecting figures who are unable to form close relationships. The facsimile of genuine illness, therefore, is used to re-create the desired positive parent-child bond. The disorders are a

form of repetitional compulsion, repeating the basic conflict of needing and seeking acceptance and love while expecting that they will not be forthcoming. Hence, the patient transforms the physicians and staff members into rejecting parents. Patients who seek out painful procedures, such as surgical operations and invasive diagnostic tests, may have a masochistic personality makeup in which pain serves as punishment for past sins, imagined or real. Some patients may attempt to master the past and the early trauma of serious medical illness or hospitalization by assuming the role of the patient and reliving the painful and frightening experience over and over again through multiple hospitalizations. Patients who feign psychiatric illness may have had a relative who was hospitalized with the illness they are simulating. Through identification, patients hope to reunite with the relative in a magical way. Many patients have the poor identity formation and disturbed self-image that is characteristic of someone with borderline personality disorder. Some patients are as-if personalities who have assumed the identities of those around them. If these patients are health professionals, they are often unable to differentiate themselves from the patients with whom they come in contact. The cooperation or encouragement of other persons in simulating a factitious illness occurs in a rare variant of the disorder. Although most patients act alone, friends or relatives participate in fabricating the illness in some instances. Significant defense mechanisms are repression, identification with the aggressor, regression, and symbolization. Biological Factors Some researchers have proposed that brain dysfunction may be a factor in factitious disorders. It has been hypothesized that impaired information processing contributes to the pseudologia fantastica and aberrant behavior of patients with Munchausen disorder; however, no genetic patterns have been established, and electroencephalographic (EEG) studies noted no specific abnormalities in patients with factitious disorders. **DIAGNOSIS AND CLINICAL FEATURES** Factitious disorder is the faking of physical or psychological signs and symptoms. Clues that should trigger suspicion of the disorder are given in Table 13.6-1. The psychiatric examination should emphasize securing information from any available friends, relatives, or other informants, because interviews with reliable outside sources often reveal the false nature of the patient's illness. Although time-consuming and tedious, verifying all the facts presented by the patient about previous hospitalizations and medical care is essential. **Table 13.6-1 Clues that Should Trigger Suspicion of Factitious Disorder**

Psychiatric evaluation is requested on a consultation basis in about 50 percent of cases, usually after a simulated illness is suspected. The psychiatrist is often asked to confirm the diagnosis of factitious disorder. Under these circumstances, it is necessary to avoid pointed or accusatory questioning that may provoke truculence, evasion, or flight from the hospital. A danger may exist of provoking frank psychosis if vigorous confrontation is used; in some instances, the feigned

illness serves an adaptive function and is a desperate attempt to ward off further disintegration. Factitious disorder has been divided into two groups depending on the types of signs or symptoms feigned. There is one disorder marked by psychological symptoms and another marked by physical symptoms. Both may occur together. In DSM-5, no distinction is made between the two and the disorder is divided into that “imposed on self” and that “imposed on another” (factitious disorder by proxy). In the discussion that follows, the clinical picture of either psychological symptoms or physical symptoms is considered separately. Factitious Disorder with Predominantly Psychological Signs and Symptoms Some patients show psychiatric symptoms judged to be feigned. This determination can be difficult and is often made only after a prolonged investigation. The feigned symptoms frequently include depression, hallucinations, dissociative and conversion symptoms, and bizarre behavior. Because the patient’s condition does not improve after routine therapeutic measures are administered, he or she may receive large doses of psychoactive drugs and may undergo electroconvulsive therapy. Factitious psychological symptoms resemble the phenomenon of pseudomalingering, conceptualized as satisfying the need to maintain an intact self-image, which would be

marred by admitting psychological problems that are beyond the person’s capacity to master through conscious effort. In this case, deception is a transient ego-supporting device. Recent findings indicate that factitious psychotic symptoms are more common than had previously been suspected. The presence of simulated psychosis as a feature of other disorders, such as mood disorders, indicates a poor overall prognosis. Inpatients who are psychotic and found to have factitious disorder with predominantly psychological signs and symptoms—that is, exclusively simulated psychotic symptoms—generally have a concurrent diagnosis of borderline personality disorder. In these cases, the outcome appears to be worse than that of bipolar I disorder or schizoaffective disorder. Patients may appear depressed and may explain their depression by offering a false history of the recent death of a significant friend or relative. Elements of the history that may suggest factitious bereavement include a violent or bloody death, a death under dramatic circumstances, and the dead person being a child or a young adult. Other patients may describe either recent and remote memory loss or both auditory and visual hallucinations. Some patients may use psychoactive substances for the purpose of producing symptoms, such as stimulants to produce restlessness or insomnia, or hallucinogens to produce distortions of reality. Combinations of psychoactive substances can produce very unusual presentations. Other symptoms, which also appear in the physical type of factitious disorder, include pseudologia fantastica and impostorship. In pseudologia fantastica, limited factual material is mixed with extensive and colorful fantasies. The listener’s interest pleases the patient and, thus, reinforces the symptom. The history or the symptoms are not the only distortions of truth. Patients often give false and conflicting accounts about other areas of their lives (e.g., they may claim the death of a parent, to play on the sympathy of others). Imposture is commonly related to lying in these cases. Many patients assume the identity of a prestigious person. Men, for example, report being war heroes and attribute their surgical scars to wounds received during battle or in other dramatic and dangerous exploits. Similarly, they may say that they have ties to accomplished or renowned figures. Table 13.6-2 lists various syndromes feigned by patients who want to be seen as having a mental illness. Table 13.6-2 Presentations in Factitious Disorder with Predominantly Psychological Signs and Symptoms

Ms. MA was 24 years of age when she first presented in 1973 after an overdose. She gave a history of recurrent overdoses and wrist-slashing attempts since 1969, and, on admission, she stated that

she was controlled by her dead sister who kept telling her to take her own life. Her family history was negative. She was found to be carrying a list of Schneiderian first-rank symptoms in her handbag; she behaved bizarrely, picking imaginary objects out of the wastepaper basket and opening imaginary doors in the waiting room. She admitted to visual hallucinations and offered four of the first-rank symptoms on her list, but her mental state reverted to normal after 2 days. When she was presented at a case conference, the consensus view was that she had been simulating schizophrenia but had a gross personality disorder; however, the consultant in charge dissented from that general view, feeling that she was genuinely psychotic. On follow-up, this turned out to be the case. She was readmitted in 1975 and was mute, catatonic, grossly thought disordered, and the diagnosis was changed to that of a schizophrenic illness. She has been followed up regularly since and now presents the picture of a mild schizophrenic defect state; she takes regular depot medication but still complains of auditory hallucinations, hearing her dead sister's voice. She is a day patient. (Courtesy of Dora Wang, M.D., Deepa N. Nadiga, M.D., and James J. Jenson, M.D.)

**Chronic Factitious Disorder with Predominantly Physical Signs and Symptoms** Factitious disorder with predominantly physical signs and symptoms is the best-known type of Munchausen syndrome. The disorder has also been called hospital addiction, polysurgical addiction—producing the so-called washboard abdomen—and professional patient syndrome, among other names. The essential feature of patients with the disorder is their ability to present physical symptoms so well that they can gain admission to, and stay in, a hospital. To support their history, these patients may feign symptoms suggesting a disorder involving any organ system. They are familiar with the diagnoses of most disorders that usually require hospital admission or medication and can give excellent histories capable of

deceiving even experienced clinicians. Clinical presentations are myriad and include hematoma, hemoptysis, abdominal pain, fever, hypoglycemia, lupus-like syndromes, nausea, vomiting, dizziness, and seizures. Urine is contaminated with blood or feces; anticoagulants are taken to simulate bleeding disorders; insulin is used to produce hypoglycemia; and so on. Such patients often insist on surgery and claim adhesions from previous surgical procedures. They may acquire a “gridiron” or washboard-like abdomen from multiple procedures. Complaints of pain, especially that simulating renal colic, are common, with the patients wanting narcotics. In about half the reported cases, these patients demand treatment with specific medications, usually analgesics. Once in the hospital, they continue to be demanding and difficult. As each test is returned with a negative result, they may accuse doctors of incompetence, threaten litigation, and become generally abusive. Some may sign out abruptly shortly before they believe they are going to be confronted with their factitious behavior. They then go to another hospital in the same or another city and begin the cycle again. Specific predisposing factors are true physical disorders during childhood leading to extensive medical treatment, a grudge against the medical profession, employment as a medical paraprofessional, and an important relationship with a physician in the past. See Color Plate 13.6-2 for factitious skin disease. **Factitious Disorder with Combined Psychological and Physical Signs and Symptoms** In combined forms of factitious disorder, both psychological and physical signs and symptoms are present. In one representative report, a patient alternated between feigned dementia, bereavement, rape, and seizures. Table 13.6-3 provides a comprehensive overview of a variety of signs and symptoms that may be faked and mistaken for genuine illness. The table also includes the means of simulation and possible methods of detection. **Table 13.6-3 Presentations of Factitious Disorder with Predominantly Physical Signs and Symptoms with Means of Simulation and Possible Methods of Detection**

**Factitious Disorder by Proxy** In this diagnosis, a person intentionally produces physical signs or symptoms in another person who is under the first person's care, hence the DSM-5 diagnosis of "Factitious Disorder Imposed on Another." One apparent purpose of the behavior is for the caretaker to indirectly assume the sick role; another is to be relieved of the caretaking role by having the child hospitalized. The most common case of factitious disorder by proxy involves a mother who deceives medical personnel into believing that her child is ill. The deception may involve a false medical history, contamination of laboratory samples, alteration of records, or induction of injury and illness in the child. BC, a 1-month-old girl, was admitted for the evaluation of fever. Psychiatric consultation was requested due to inconsistencies in the mother's reporting of medical information despite her presentation as a knowledgeable and caring mother who worked as an emergency medical technician. BC's mother reported her own diagnosis of ovarian cancer when she was 3 months pregnant with BC. She reported undergoing a hysterectomy during her cesarean section, and that she had been getting radiation therapy at a local hospital since BC's birth. The pediatrician called the local hospital with the mother's permission and learned that she had a corpus luteum cyst removed at 3 months' gestation and mild hydronephrosis but no cancer or hysterectomy. BC's mother, when confronted with this, stated only that she might need a kidney transplant for the hydronephrosis. On further exploration, it was discovered that the mother had brought her children to multiple emergency rooms, giving inaccurate histories that prompted excessive testing. At one visit, she told clinicians that her 2-year-old son had lupus and hypergammaglobulinemia, and at another visit, that he had asthma and seizures. She also pursued a minor cosmetic surgical procedure for him against his pediatrician's recommendation. Clinicians suspected that BC's mother intentionally fabricated symptoms, such as by

warming BC's thermometer, and that she did not actively induce symptoms in her children. She was faithful in keeping medical appointments, and her children appeared healthy and well cared for, despite her factitious behavior. The mother denied a psychiatric history but gave permission for clinicians to contact the local psychiatric hospital, which revealed her history of depression, anorexia, panic disorder, and a suicide attempt resulting in a psychiatric hospitalization. Subsequently, she received psychotherapy and psychopharmacotherapy, which she stopped a few months prior to this presentation. During BC's admission for fever, her mother agreed to resume psychiatric treatment. A social services referral was made, and the pediatrician decided to schedule regular follow-up visits for the children.

**PATHOLOGY AND LABORATORY EXAMINATION** Psychological testing may reveal underlying pathology in individual patients. Features that are overrepresented in patients with factitious disorder include normal or aboveaverage intelligence quotient, absence of a formal thought disorder, poor sense of identity, including confusion over sexual identity, poor sexual adjustment, poor frustration tolerance, strong dependence needs, and narcissism. An invalid test profile and elevations of all clinical scales on the Minnesota Multiphasic Personality Inventory2 (MMPI-2) indicate an attempt to appear more disturbed than is the case ("fake bad"). No laboratory or pathology tests are diagnostic of factitious disorders, although they may help to confirm the diagnosis by demonstrating deception. Certain tests (e.g., drug screening), however, may help confirm or rule out specific mental or medical disorders.

**DIFFERENTIAL DIAGNOSIS** Any disorder in which physical signs and symptoms are prominent should be considered in the differential diagnosis, and the possibility of authentic or concomitant physical illness must always be explored. Additionally, a history of many surgeries in patients with factitious disorder may predispose such patients to complications or actual diseases, necessitating even further surgery. Factitious disorder is on a continuum between somatoform disorders and

malingering, the goal being to assume the sick role. On the one hand, it is unconscious and nonvolitional, and on the other hand, it is conscious and willful (malingering). Conversion Disorders A factitious disorder is differentiated from conversion disorder by the voluntary production of factitious symptoms, the extreme course of multiple hospitalizations, and the seeming willingness of patients with a factitious disorder to undergo an extraordinary number of mutilating procedures. Patients with conversion disorder are not usually conversant with medical terminology and hospital routines, and their symptoms have a direct temporal relation or symbolic reference to specific emotional

conflicts. Hypochondriasis or illness anxiety disorder differs from factitious disorder in that the hypochondriacal patient does not voluntarily initiate the production of symptoms, and hypochondriasis typically has a later age of onset. As with conversion disorder, patients with hypochondriasis do not usually submit to potentially mutilating procedures. Personality Disorders Because of their pathological lying, lack of close relationships with others, hostile and manipulative manner, and associated substance abuse and criminal history, patients with factitious disorder are often classified as having antisocial personality disorder. Antisocial persons, however, do not usually volunteer for invasive procedures or resort to a way of life marked by repeated or long-term hospitalization. Because of attention seeking and an occasional flair for the dramatic, patients with factitious disorder may be classified as having histrionic personality disorder. But not all such patients have a dramatic flair; many are withdrawn and bland. Consideration of the patient's chaotic lifestyle, history of disturbed interpersonal relationships, identity crisis, substance abuse, self-damaging acts, and manipulative tactics may lead to the diagnosis of borderline personality disorder. Persons with factitious disorder usually do not have the eccentricities of dress, thought, or communication that characterize schizotypal personality disorder patients. Schizophrenia The diagnosis of schizophrenia is often based on patients' admittedly bizarre lifestyles, but patients with factitious disorder do not usually meet the diagnostic criteria for schizophrenia unless they have the fixed delusion that they are actually ill and act on this belief by seeking hospitalization. Such a practice seems to be the exception; few patients with factitious disorder show evidence of a severe thought disorder or bizarre delusions. Malingering Factitious disorders must be distinguished from malingering. Malingerers have an obvious, recognizable environmental goal in producing signs and symptoms. They may seek hospitalization to secure financial compensation, evade the police, avoid work, or merely obtain free bed and board for the night, but they always have some apparent end for their behavior. Moreover, these patients can usually stop producing their signs and symptoms when they are no longer considered profitable or when the risk becomes too great. Substance Abuse Although patients with factitious disorders may have a complicating history of substance abuse, they should be considered not merely as substance abusers but as having

coexisting diagnoses. Ganser's Syndrome Ganser's syndrome, a controversial condition most typically associated with prison inmates, is characterized by the use of approximate answers. Persons with the syndrome respond to simple questions with astonishingly incorrect answers. For example, when asked about the color of a blue car, the person answers "red" or answers "2 plus 2 equals 5." Ganser's syndrome may be a variant of malingering, in that the patients avoid punishment or responsibility for their actions. Ganser's syndrome can be classified in DSM-5 as a type of dissociative disorder and in International Statistical Classification of Diseases and Related Health Problems, 10th edition (ICD-10), it is classified under other dissociative or conversion

disorders. In contrast, patients with factitious disorder with predominantly psychological signs and symptoms may intentionally give approximate answers. COURSE AND PROGNOSIS Factitious disorders typically begin in early adulthood, although they can appear during childhood or adolescence. The onset of the disorder or of discrete episodes of seeking treatment may follow real illness, loss, rejection, or abandonment. Usually, the patient or a close relative had a hospitalization in childhood or early adolescence for a genuine physical illness. Thereafter, a long pattern of successive hospitalizations begins insidiously and evolves. As the disorder progresses, the patient becomes knowledgeable about medicine and hospitals. The onset of the disorder in patients who had early hospitalizations for actual illness is earlier than generally reported. Factitious disorders are incapacitating to the patient and often produce severe trauma or untoward reactions related to treatment. A course of repeated or long-term hospitalization is obviously incompatible with meaningful vocational work and sustained interpersonal relationships. The prognosis in most cases is poor. A few patients occasionally spend time in jail, usually for minor crimes, such as burglary, vagrancy, and disorderly conduct. Patients may also have a history of intermittent psychiatric hospitalization. Although no adequate data are available about the ultimate outcome for the patients, a few of them probably die as a result of needless medication, instrumentation, or surgery. In view of the patients' often expert simulation and the risks that they take, some may die without the disorder being suspected. Possible features that indicate a favorable prognosis are (1) the presence of a depressive-masochistic personality; (2) functioning at a borderline, not a continuously psychotic, level; and (3) the attributes of an antisocial personality disorder with minimal symptoms. TREATMENT No specific psychiatric therapy has been effective in treating factitious disorders. It is a

clinical paradox that patients with the disorders simulate serious illness and seek and submit to unnecessary treatment while they deny to themselves and others their true illness and thus avoid possible treatment for it. Ultimately, the patients elude meaningful therapy by abruptly leaving the hospital or failing to keep follow-up appointments. Treatment, thus, is best focused on management rather than on cure. Guidelines for the treatment and management of factitious disorder are given in Table 13.6-4. The three major goals in the treatment and management of factitious disorders are (1) to reduce the risk of morbidity and mortality, (2) to address the underlying emotional needs or psychiatric diagnosis underlying factitious illness behavior, and (3) to be mindful of legal and ethical issues. Perhaps the single most important factor in successful management is a physician's early recognition of the disorder. In this way, physicians can forestall a multitude of painful and potentially dangerous diagnostic procedures for these patients. Good liaison between psychiatrists and the medical or surgical staff is strongly advised. Although a few cases of individual psychotherapy have been reported in the literature, no consensus exists about the best approach. In general, working in concert with the patient's primary care physician is more effective than working with the patient in isolation. Table 13.6-4 Guidelines for Management and Treatment of Factitious Disorder The personal reactions of physicians and staff members are of great significance in

treating and establishing a working alliance with these patients, who invariably evoke feelings of futility, bewilderment, betrayal, hostility, and even contempt. In essence, staff members are forced to abandon a basic element of their relationship with patients —accepting the truthfulness of the patients' statements. One appropriate psychiatric intervention is to suggest to the staff ways of remaining aware that even though the patient's illness is factitious, the patient is ill. Physicians

should try not to feel resentment when patients humiliate their diagnostic prowess, and they should avoid any unmasking ceremony that sets up the patients as adversaries and precipitates their flight from the hospital. The staff should not perform unnecessary procedures or discharge patients abruptly, both of which are manifestations of anger. Clinicians who find themselves involved with patients with factitious disorders may become angry at the patients for lying and deceiving them. Hence, therapists must be mindful of countertransference whenever they suspect factitious disorder. Often, the diagnosis is unclear because a definitive physical cause cannot be entirely ruled out. Although the use of confrontation is controversial, at some point in the treatment, patients must be made to face reality. Most patients simply leave treatment when their methods of gaining attention are identified and exposed. In some cases, clinicians should reframe the factitious disorder as a cry for help, so that patients do not view the clinicians' responses as punitive. A major role for psychiatrists working with patients with factitious disorder is to help other staff members in the hospital deal with their own sense of outrage at having been duped. Education about the disorder and some attempt to understand the patient's motivations may help staff members maintain their professional conduct in the face of extreme frustration. In cases of factitious disorder by proxy, legal intervention has been obtained in several instances, particularly with children. The senselessness of the disorder and the denial of false action by parents are obstacles to successful court action and often make conclusive proof unobtainable. In such cases, the child welfare services should be notified, and arrangements made for ongoing monitoring of the children's health (see Table 13.6-5 for interventions for pediatric factitious disorder by proxy).

Table 13.6-5 Interventions for Pediatric Factitious Disorder by Proxy

Pharmacotherapy of factitious disorders is of limited use. Major mental disorders such as schizophrenia will respond to antipsychotic medication; however, in all cases, medication should be administered carefully because of the potential for abuse. Selective serotonin reuptake inhibitors (SSRIs) may be useful in decreasing impulsive behavior when that is a major component in acting-out factitious behavior.

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# 07 - 13.7 Pain Disorder

## 13.7 Pain Disorder

13.7 Pain Disorder In the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), pain disorder warranted its own diagnostic category; but in the current fifth edition (DSM-5), it is diagnosed as a variant of somatic symptom disorder. Its importance is such, however, that it warrants a separate discussion in this textbook. A pain disorder is characterized by the presence of, and focus on, pain in one or more body sites and is sufficiently severe to come to clinical attention. Psychological factors are necessary in the genesis, severity, or maintenance of the pain, which causes significant distress, impairment, or both. The physician does not have to judge the pain to be “inappropriate” or “in excess of what would be expected.” Rather, the phenomenological and diagnostic focus is on the importance of psychological factors and the degree of impairment caused by the pain. The disorder has been called somatoform pain disorder, psychogenic pain disorder, idiopathic pain disorder, and atypical pain disorder. Pain disorder is diagnosed as “Unspecified Somatic Symptom Disorder” in DSM-5 or it may be designated as a “specifier” under that heading.

**EPIDEMIOLOGY** The prevalence of pain disorder appears to be common. Recent work indicates that the 6-month and lifetime prevalence is approximately 5 and 12 percent, respectively. It has been estimated that 10 to 15 percent of adults in the United States have some form of work disability because of back pain alone in any year. Approximately 3 percent of people in a general practice have persistent pain, with at least 1 day per month of activity restriction because of the pain. Pain disorder can begin at any age. The gender ratio is unknown. Pain disorder is associated with other psychiatric disorders, especially affective and anxiety disorders. Chronic pain appears to be most frequently associated with depressive disorders, and acute pain appears to be more commonly associated with anxiety disorders. The associated psychiatric disorders may precede the pain disorder, may co-occur with it, or may result from it. Depressive disorders, alcohol dependence, and chronic pain may be more common in relatives of individuals with chronic pain disorder. Individuals whose pain is associated with severe depression and those whose pain is related to a terminal illness, such as cancer, are at increased risk for suicide. Differences may exist in how various ethnic and cultural groups respond to pain, but the usefulness of cultural factors for the clinician remains obscure to the treatment of individuals with pain disorder because of a lack of good data and because of high individual variability.

**ETIOLOGY** **Psychodynamic Factors** Patients who experience bodily aches and pains without identifiable and adequate physical causes may be symbolically expressing an intrapsychic conflict through the

body. Patients suffering from alexithymia, who are unable to articulate their internal feeling states in words, express their feelings with their bodies. Other patients may unconsciously regard emotional pain as weak and somehow lacking legitimacy. By displacing the problem to the body, they may feel they have a legitimate claim to the fulfillment of their dependency needs. The symbolic meaning of body disturbances may also relate to atonement for perceived sin, to

expiation of guilt, or to suppressed aggression. Many patients have intractable and unresponsive pain because they are convinced they deserve to suffer. Pain can function as a method of obtaining love, a punishment for wrongdoing, and a way of expiating guilt and atoning for an innate sense of badness. Among the defense mechanisms used by patients with pain disorder are displacement, substitution, and repression. Identification plays a part when a patient takes on the role of an ambivalent love object who also has pain, such as a parent. Behavioral Factors Pain behaviors are reinforced when rewarded and are inhibited when ignored or punished. For example, moderate pain symptoms may become intense when followed by the solicitous and attentive behavior of others, by monetary gain, or by the successful avoidance of distasteful activities. Interpersonal Factors Intractable pain has been conceptualized as a means for manipulation and gaining advantage in interpersonal relationships, for example, to ensure the devotion of a family member or to stabilize a fragile marriage. Such secondary gain is most important to patients with pain disorder. Biological Factors The cerebral cortex can inhibit the firing of afferent pain fibers. Serotonin is probably the main neurotransmitter in the descending inhibitory pathways, and endorphins also play a role in the central nervous system modulation of pain. Endorphin deficiency seems to correlate with augmentation of incoming sensory stimuli. Some patients may have pain disorder, rather than another mental disorder, because of sensory and limbic structural or chemical abnormalities that predispose them to experience pain. **DIAGNOSIS AND CLINICAL FEATURES** Patients with pain disorder are not a uniform group, but a heterogeneous collection of persons with low back pain, headache, atypical facial pain, chronic pelvic pain, and other kinds of pain. A patient's pain may be posttraumatic, neuropathic, neurological, iatrogenic, or musculoskeletal; to meet a diagnosis of pain disorder, however, the disorder must have a psychological factor judged to be significantly involved in the pain symptoms and their ramifications.

Patients with pain disorder often have long histories of medical and surgical care. They visit many physicians, request many medications, and may be especially insistent in their desire for surgery. Indeed, they can be completely preoccupied with their pain and cite it as the source of all their misery. Such patients often deny any other sources of emotional dysphoria and insist that their lives are blissful except for their pain. Their clinical picture can be complicated by substance-related disorders, because these patients attempt to reduce the pain through the use of alcohol and other substances. At least one study has correlated the number of pain symptoms to the likelihood and severity of symptoms of somatic symptom disorder, depressive disorder, and anxiety disorder. Major depressive disorder is present in about 25 to 50 percent of patients with pain disorder, and dysthymic disorder or depressive disorder symptoms are reported in 60 to 100 percent of the patients. Some investigators believe that chronic pain is almost always a variant of a depressive disorder, a masked or somatized form of depression. The most prominent depressive symptoms in patients with pain disorder are anergia, anhedonia, decreased libido, insomnia, and irritability; diurnal variation, weight loss, and psychomotor retardation appear to be less common. A 54-year-old accountant sought out his family physician with complaints of severe back pain that came on suddenly while trying to lift a piece of heavy furniture at home. On examination he showed no focal neurological signs but was unable to straighten up into an upright position. The patient was referred for magnetic resonance imaging (MRI), which revealed no structural abnormalities. He was advised to have several sessions with a physical therapist to treat what was diagnosed as "back strain," but as the therapy progressed, his pain became more severe, and he complained of muscle tension in his neck in addition to his back and spent most of his days sitting in a chair or lying on a bedboard on his bed. He was eventually referred to a psychiatrist and talked

about the stress he was experiencing at work since an assistant that he relied on was fired because of his firm's need to downsize. His work load had increased tremendously as a result. The formulation by the psychiatrist was that the patient was "somatizing" his anger, transforming the strong affect into pain that enabled him to escape from the stressful situation. A course of psychoeducation was begun in which these dynamics were explored. Equally important was his asserting himself at work, explaining that the load he was expected to carry was too much and that help was required. When this was accomplished, the patient's back pain disappeared within a matter of days.

**DIFFERENTIAL DIAGNOSIS** Purely physical pain can be difficult to distinguish from purely psychogenic pain, especially because the two are not mutually exclusive. Physical pain fluctuates in intensity and is highly sensitive to emotional, cognitive, attentional, and situational

influences. Pain that does not vary and is insensitive to any of these factors is likely to be psychogenic. When pain does not wax and wane and is not even temporarily relieved by distraction or analgesics, clinicians can suspect an important psychogenic component. Pain disorder must be distinguished from other somatic symptom disorders, although there may be overlap. Patients with hypochondriacal preoccupations may complain of pain, and aspects of the clinical presentation of hypochondriasis, such as bodily preoccupation and disease conviction, can also be present in patients with pain disorder. Patients with hypochondriasis tend to have many more symptoms than patients with pain disorder, and their symptoms tend to fluctuate more than those of patients with pain disorder. Conversion disorder is generally short-lived, whereas pain disorder is chronic. In addition, pain is, by definition, not a symptom in conversion disorder. Malingering patients consciously provide false reports, and their complaints are usually connected to clearly recognizable goals. The differential diagnosis can be difficult because patients with pain disorder often receive disability compensation or a litigation award. Muscle contraction (tension) headaches, for example, have a pathophysiological mechanism to account for the pain and so are not diagnosed as pain disorder. Patients with pain disorder are not pretending to be in pain, however. As in all of these disorders, symptoms are not imaginary.

**COURSE AND PROGNOSIS** The pain in pain disorder generally begins abruptly and increases in severity for a few weeks or months. The prognosis varies, although pain disorder can often be chronic, distressful, and completely disabling. Acute pain disorders have a more favorable prognosis than chronic pain disorders. A wide range of variability is seen in the onset and course of chronic pain disorder. In many cases, the pain has been present for many years by the time the individual comes to psychiatric care, owing to the reluctance of the patient and the physician's tendency to see pain as a psychiatric disorder. People with pain disorder who resume participation in regularly scheduled activities, despite the pain, have a more favorable prognosis than people who allow the pain to become the determining factor in their lifestyle.

**TREATMENT** Because it may not be possible to reduce the pain, the treatment approach must address rehabilitation. Clinicians should discuss the issue of psychological factors early in treatment and should frankly tell patients that such factors are important in the cause and consequences of both physical and psychogenic pain. Therapists should also explain how various brain circuits that are involved with emotions (e.g., the limbic system) can influence the sensory pain pathways. For example, persons who hit their head while happy at a party can seem to experience less pain than when they hit their head while angry and at work. Nevertheless, therapists must fully understand that the patient's

experiences of pain are real. **Pharmacotherapy** Analgesic medications do not generally benefit most patients with pain disorder. In addition, substance abuse and dependence are often major

problems for such patients who receive long-term analgesic treatment. Sedatives and antianxiety agents are not especially beneficial and are also subject to abuse, misuse, and adverse effects. Antidepressants, such as tricyclics and selective serotonin reuptake inhibitors (SSRIs), are the most effective pharmacological agents. Whether antidepressants reduce pain through their antidepressant action or exert an independent, direct analgesic effect (possibly by stimulating efferent inhibitory pain pathways) remains controversial. The success of SSRIs supports the hypothesis that serotonin is important in the pathophysiology of the disorder. Amphetamines, which have analgesic effects, may benefit some patients, especially when used as an adjunct to SSRIs, but dosages must be monitored carefully.

**Psychotherapy** Some outcome data indicate that psychodynamic psychotherapy can benefit patients with pain disorder. The first step in psychotherapy is to develop a solid therapeutic alliance by empathizing with the patient's suffering. Clinicians should not confront somatizing patients with comments such as "This is all in your head." For the patient, the pain is real, and clinicians must acknowledge the reality of the pain, even as they understand that it is largely intrapsychic in origin. A useful entry point into the emotional aspects of the pain is to examine its interpersonal ramifications in the patient's life. In marital therapy, for example, the psychotherapist may soon get to the source of the patient's psychological pain and the function of the physical complaints in significant relationships. Cognitive therapy has been used to alter negative thoughts and to foster a positive attitude.

**Other Therapies** Biofeedback can be helpful in the treatment of pain disorder, particularly with migraine pain, myofascial pain, and muscle tension states, such as tension headaches. Hypnosis, transcutaneous nerve stimulation, and dorsal column stimulation have also been used. Nerve blocks and surgical ablative procedures are effective for some patients with pain disorder; but these procedures must be repeated, because the pain returns after 6 to 18 months.

**Pain Control Programs** Sometimes it may be necessary to remove patients from their usual settings and place them in a comprehensive inpatient or outpatient pain control program or clinic. Multidisciplinary pain units use many modalities, such as cognitive, behavior, and group

# 08 - 13.8 Consultation

## Liaison Psychiatry

### 13.8 Consultation-Liaison Psychiatry

therapies. They provide extensive physical conditioning through physical therapy and exercise and offer vocational evaluation and rehabilitation. Concurrent mental disorders are diagnosed and treated, and patients who are dependent on analgesics and hypnotics are detoxified. Inpatient multimodal treatment programs generally report encouraging results. REFERENCES Bak JA. Review of pain comorbidities: Understanding and treating the complex patient. *J Neurosci Nurs*. 2013;45(3):176-177. Brown RJ, Schrag A, Trimble MR. Dissociation, childhood interpersonal trauma, and family functioning in patients with somatization disorder. *Am J Psychiatry*. 2005;162:899-905. Grabe HJ, Meyer C, Hapke U, Rumpf HJ, Freyberger HJ, Dilling H, John U. Specific somatoform disorder in the general population. *Psychosomatics*. 2003;44:304. Keefe FJ, Abernethy AP, Campbell LC. Psychological approaches to understanding and treating disease-related pain. *Annu Rev Psychol*. 2005;56:601-630. Mayou R, Kirmayer LJ, Simon G, Kroenke K, Sharpe M. Somatoform disorders: Time for a new approach in DSM-V. *Am J Psychiatry*. 2005;162(5):847-855. Noll-Hussong M, Otti A, Wohlschlaeger AM, Zimmer C, Henningsen P, Lahmann C, Ronel J, Subic-Wrana C, Lane RD, Decety J, Guendel H. Neural correlates of deficits in pain-related affective meaning construction in patients with chronic pain disorder. *Psychosom Med*. 2013;75(2):124-136. Sansone RA, Pole M, Dakroub H, Butler M. Childhood trauma, borderline personality symptomatology, and psychophysiological and pain disorders in adulthood. *Psychosomatics*. 2006;47:158-162. Wasserman RA, Brummett CM, Goesling J, Tsodikov A, Hasset AL. Characteristics of chronic pain patients who take opioids and persistently report high pain intensity. *Reg Anesth Pain Med*. 2014;39(1):13-17.

13.8 Consultation-Liaison Psychiatry Consultation-liaison (C-L) psychiatry is the study, practice, and teaching of the relation between medical and psychiatric disorders. In C-L psychiatry, psychiatrists serve as consultants to medical colleagues (either another psychiatrist or, more commonly, a nonpsychiatric physician) or to other mental health professionals (psychologist, social worker, or psychiatric nurse). In addition, C-L psychiatrists consult regarding patients in medical or surgical settings and provide follow-up psychiatric treatment as needed. C-L psychiatry is associated with all the diagnostic, therapeutic, research, and teaching services that psychiatrists perform in the general hospital and serves as a bridge between psychiatry and other specialties. In the medical wards of the hospital, C-L psychiatrists must play many roles: skillful and brief interviewer, good psychiatrist and psychotherapist, teacher,

and knowledgeable physician who understands the medical aspects of the case. The C-L psychiatrist is part of the medical team who makes a unique contribution to the patient's total medical treatment. The scope of C-L psychiatry is outlined in Table 13.8-1.

**Table 13.8-1 Scope of Consultation-Liaison Psychiatry**

**DIAGNOSIS** Knowledge of psychiatric diagnosis is essential to C-L psychiatrists. Both dementia and delirium frequently complicate medical illness, especially among hospital patients. Delirium occurs in 15 to 30 percent of hospitalized patients. Psychoses and other mental disorders often complicate the treatment of medical illness, and deviant illness behavior, such as suicide, is a common problem in patients who are organically ill. C-L psychiatrists must be aware of the many medical illnesses that can have psychiatric symptoms. Lifetime prevalence of mental illness in chronically physically ill patients is more than 40 percent, particularly substance abuse and mood and anxiety disorders. Interviews and serial clinical observations are the C-L psychiatrist's tools for diagnosis. The purposes of the diagnosis are to identify (1) mental disorders and psychological responses to physical illness, (2) patients' personality features, and (3) patients' characteristic coping techniques to recommend the most appropriate therapeutic intervention for patients' needs.

**TREATMENT** The C-L psychiatrists' principal contribution to medical treatment is a comprehensive analysis of a patient's response to illness, psychological and social resources, coping

style, and psychiatric illness, if any. This assessment is the basis of the patient treatment plan. In discussing the plan, C-L psychiatrists provide their patient assessment to nonpsychiatric health professionals. Psychiatrists' recommendations should be clear, concrete guidelines for action. A C-L psychiatrist may recommend a specific therapy, suggest areas for further medical inquiry, inform doctors and nurses of their roles in the patient's psychosocial care, recommend a transfer to a psychiatric facility for long-term psychiatric treatment, or suggest or undertake brief psychotherapy with the patient on the medical ward. C-L psychiatrists must deal with a broad range of psychiatric disorders, the most common symptoms being anxiety, depression, and disorientation. Treatment problems account for 50 percent of the consultation requests made of psychiatrists.

**Common C-L Problems**

**Suicide Attempt or Threat.** Suicide rates are higher in persons with medical illness than in those without medical or surgical problems. High-risk factors for suicide are men over 45 years of age, no social support, alcohol dependence, previous suicide attempt, and incapacitating or catastrophic medical illness, especially if accompanied by severe pain. If suicide risk is present, the patient should be transferred to a psychiatric unit or started on 24-hour nursing care.

**Depression.** As mentioned, suicidal risk must be assessed in every depressed patient. Depression without suicidal ideation is not uncommon in hospitalized patients, and treatment with antidepressant medication can be started if necessary. A careful assessment of drug-drug interactions must be made before prescribing, which should be undertaken in collaboration with the patient's primary physician. Antidepressants should be used cautiously in cardiac patients because of conduction side effects and orthostatic hypotension.

**Agitation.** Agitation is often related to the presence of a cognitive disorder or associated with withdrawal from drugs (e.g., opioids, alcohol, sedative hypnotics). Antipsychotic medications (e.g., haloperidol [Haldol]) are very useful for excessive agitation. Physical restraints should be used with great caution and only as a last resort. The patient should be examined for command hallucinations or paranoid ideation to which he or she is responding to in an agitated manner. Toxic reactions to medications that cause agitation should always be ruled out.

**Hallucinations.** The most common cause of hallucinations is delirium tremens, which usually begin 3 to 4 days after hospitalization. Patients in intensive care

units (ICU) who experience sensory isolation may respond with hallucinatory activity. Conditions such as brief psychotic disorder, schizophrenia, and neurocognitive disorders are associated with hallucinations, and they respond rapidly to antipsychotic medication. Delirium, in which the patient believes that bugs are crawling over the

skin, is often associated with cocaine use. Sleep-Wake Disorders. A common cause of insomnia in hospitalized patients is pain, which when treated, solves the sleep problem. Early morning awakening is associated with depression, and difficulty falling asleep is associated with anxiety. Depending on the cause, anxiolytic or antidepressant agents may be prescribed. Early substance withdrawal as a cause of insomnia should be considered in the differential diagnosis. Confusion. Delirium is the most common cause of confusion or disorientation among hospitalized patients in general hospitals. The causes are myriad and relate to metabolic status, neurological findings, substance abuse, and mental illness, among many others. Small doses of antipsychotics may be used when major agitation occurs in conjunction with the confused state; however, sedatives, such as benzodiazepines, can worsen the condition and cause sundowning syndrome (ataxia, disorientation). If sensory deprivation is a contributing factor, the environment can be modified so that the patient has sensory cues (e.g., radio, clock, no curtains around the bed). Table 13.8-2 lists the probable causes of confusional states that require urgent attention. Table 13.8-2 Some Clues to Causes of Acute Confusional States Demanding Urgent Attention

Noncompliance or Refusal to Consent to Procedure. Issues such as noncompliance and refusal to consent to a procedure can sometimes be traced to the relationship of the patient and his or her treating doctor, which should be explored. A negative transference toward the physician is a common cause of noncompliance. Patients who fear medication or who fear a procedure often respond well to education

and reassurance. Patients whose refusal to give consent is related to impaired judgment can be declared incompetent, but only by a judge. Cognitive disorder is the main cause of impaired judgment in hospitalized patients. No Organic Basis for Symptoms. The C-L psychiatrist is often called in when the physician cannot find evidence of medical or surgical disease to account for the patient's symptoms. In these instances, several psychiatric conditions must be considered, including conversion disorder, somatization disorder, factitious disorders, and malingering. Glove and stocking anesthesia with autonomic nervous system symptoms is seen in conversion disorder; multiple bodily complaints are present in somatization disorder; the wish to be in the hospital occurs in factitious disorder; and obvious secondary gain is observed in patients who are malingering (e.g., compensation cases). C-L Psychiatry in Special Situations Intensive Care Units. All ICUs deal with patients who experience anxiety, depression, and delirium. ICUs also impose extraordinarily high stress on staff and patients, which is related to the intensity of the problems. Patients and staff members alike frequently observe cardiac arrests, deaths, and medical disasters, which leave them all autonomically aroused and psychologically defensive. ICU nurses and their patients experience particularly high levels of anxiety and depression. As a result, nurse burnout and high turnover rates are common. The problem of stress among ICU staff receives much attention, especially in the nursing literature. Much less attention is given to the house staff, especially those on the surgical services. All persons in ICUs must be able to deal directly with their feelings about their extraordinary experiences and difficult emotional and physical circumstances. Regular support groups in which persons can discuss their feelings are important to

the ICU staff and the house staff. Such support groups protect staff members from the otherwise predictable psychiatric morbidity that some may experience and also protect their patients from the loss of concentration, decreased energy, and psychomotor-retarded communications that some staff members otherwise exhibit. Hemodialysis Units. Hemodialysis units present a paradigm of complex modern medical treatment settings. Patients are coping with lifelong, debilitating, and limiting disease; they are totally dependent on a multiplex group of caretakers for access to a machine controlling their well-being. Dialysis is scheduled three times a week and takes 4 to 6 hours; thus, it disrupts patients' previous living routines. In this context, patients first and foremost fight the disease. Invariably, however, they also must come to terms with a level of dependence on others probably not experienced since childhood. Predictably, patients entering dialysis struggle for their independence; regress to childhood states; show denial by acting out against doctor's orders (by

breaking their diet or by missing sessions); show anger directed against staff members; bargain and plead; or become infantilized and obsequious; however, most often they are accepting and courageous. The determinants of patients' responses to entering dialysis include personality styles and previous experiences with this or another chronic illness. Patients who have had time to react and adapt to their chronic renal failure face less new psychological work of adaptation than those with recent renal failure and machine dependence. Although little has been written about social factors, the effects of culture in reaction to dialysis and the management of the dialysis unit are known to be important. Units are run with a firm hand, which is consistent in dealing with patients; clear contingencies are in place for behavioral failures; and adequate psychological support is available for staff members, which tend to produce the best results. Complications of dialysis treatment can include psychiatric problems, such as depression, and suicide is not rare. Sexual problems can be neurogenic, psychogenic, or related to gonadal dysfunction and testicular atrophy. Dialysis dementia is a rare condition that evidences loss of memory, disorientation, dystonias, and seizures. The disorder occurs in patients who have been receiving dialysis treatment for many years. The cause is unknown. The psychological treatment of dialysis patients falls into two areas. First, careful preparation before dialysis, including the work of adaptation to chronic illness, is important, especially in dealing with denial and unrealistic expectations. Predialysis, all patients should have a psychosocial evaluation. Second, once in a dialysis program, patients need periodic specific inquiries about adaptation that do not encourage dependence or the sick role. Staff members should be sensitive to the likelihood of depression and sexual problems. Group sessions function well for support, and patient self-help groups restore a useful social network, self-esteem, and self-mastery. When needed, tricyclic drugs or phenothiazines can be used for dialysis patients. Psychiatric care is most effective when brief and problem oriented. The use of home dialysis units has improved attitudes toward treatment. Patients treated at home can integrate the treatment into their daily lives more easily, and they feel more autonomous and less dependent on others for their care than do those who are treated in the hospital. Surgical Units. Some surgeons believe that patients who expect to die during surgery often will. This belief now seems less superstitious than it once did. Chase Patterson Kimball and others have studied the premorbid psychological adjustment of patients scheduled for surgery and have shown that those who show evident depression or anxiety and deny it have a higher risk for morbidity and mortality than those who, given similar depression or anxiety, can express it. Even better results occur in those with a positive attitude toward impending surgery. The factors that contribute to an improved outcome for surgery are informed consent and education so that patients know what they can expect to feel,

where they will be (e.g., it is useful to show patients the recovery room), what loss of function to expect, what tubes and gadgets will be in

place, and how to cope with the anticipated pain. If patients will not be able to talk or see after surgery, it is helpful to explain before surgery what they can do to compensate for these losses. If postoperative states such as confusion, delirium, and pain can be predicted, they should be discussed with patients in advance so they do not experience them as unwarranted or as signs of danger. Constructive family support members can help both before and after surgery.

**Transplantation Issues.** Transplantation programs have expanded over the past decade, and C-L psychiatrists play an important role in helping patients and their families deal with the many psychosocial issues involved: (1) which and when patients on a waiting list will receive organs, (2) anxiety about the procedure, (3) fear of death, (4) organ rejection, and (5) adaptation to life after successful transplantation. After transplant, patients require complex aftercare, and achieving compliance with medication may be difficult without supportive psychotherapy. This is particularly relevant to patients who have received liver transplants as a result of hepatitis C brought on by promiscuous sexual behavior and to drug addicts who use contaminated needles. Group therapy with patients who have had similar transplantation procedures benefits members who can support one another and share information and feelings about particular stressors related to their disease. Groups may be conducted or supervised by the psychiatrist. Psychiatrists must be especially concerned about psychiatric complication. Within 1 year of transplant, almost 20 percent of patients experience a major depression or an adjustment disorder with depressed mood. In such cases, evaluation for suicidal ideation and risk is important. In addition to depression, another 10 percent of patients experience signs of posttraumatic stress disorder, with nightmares and anxiety attacks related to the procedure. Other issues concern whether or not the transplanted organ came from a cadaver or from a living donor who may or may not be related to the patient. Pretransplant consulting sessions with potential organ donors help them to deal with fears about surgery and concerns about who will receive their donated organ. Sometimes, both the recipient and donor may be counseled together, as in cases where one sibling is donating a kidney to another. Peer support groups with both donors and recipients have also been used to facilitate coping with transplantation issues.

**PSYCHO-ONCOLOGY** Psycho-oncology seeks to study both the impact of cancer on psychological functioning and the role that psychological and behavioral variables may play in cancer risk and survival. A hallmark of psycho-oncology research has been intervention studies that attempt to influence the course of illness in patients with cancer. A landmark study by David Spiegel found that women with metastatic breast cancer who received weekly group psychotherapy survived an average of 18 months longer than control patients randomly assigned to routine care. In another study, patients with malignant melanoma

who received structured group intervention exhibited a statistically significant lower recurrence of cancer and a lower mortality rate than patients who did not receive such therapy. Patients with malignant melanoma who received the group intervention also exhibited significantly more large granular lymphocytes and natural killer (NK) cells as well as indications of increased NK cell activity, suggesting an increased immune response. Another study used a group behavioral intervention (relaxation, guided imagery, and biofeedback training) for patients with breast cancer, who demonstrated higher NK cell activity and lymphocyte mitogen responses than the controls. Because new treatment protocols, in many cases, have transformed cancer from an incurable to frequently chronic and often curable disease, the psychiatric aspects of cancer—the reactions to

both the diagnosis and the treatment—are increasingly important. At least half of the persons who contract cancer in the United States each year are alive 5 years later. Currently, an estimated 3 million cancer survivors have no evidence of the disease. About half of all cancer patients have mental disorders. The largest groups are those with adjustment disorder (68 percent), and major depressive disorder (13 percent) and delirium (8 percent) are the next most common diagnoses. Most of these disorders are thought to be reactive to the knowledge of having cancer. When persons learn that they have cancer, their psychological reactions include fear of death, disfigurement, and disability; fear of abandonment and loss of independence; fear of disruption in relationships, role functioning, and financial standings; and denial, anxiety, anger, and guilt. Although suicidal thoughts and wishes are frequent in persons with cancer, the actual incidence of suicide is only slightly higher than that in the general population. Psychiatrists should make a careful assessment of psychiatric and medical issues in every patient. Special attention should be given to family factors, in particular, preexisting intrafamily conflicts, family abandonment, and family exhaustion.

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