

Technical and operative errors

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In surgery, the person rather than systems approach emphasises the accountability of the surgeon, who, unlike colleagues in other medical disciplines, when operating carries specific responsibilities. During a surgical procedure, for example, there may be a specific action that, of itself, may be the error, such as inadvertent injury to the common bile duct during a cholecystectomy (Figure 15.3). The practical value of this kind of interpretation is that, provided latent conditions are excluded, it gives a sense of responsibility to the surgeon and it may also help to point to the most effective pathway for remediation, by counselling or retraining, as against reassessing the system and putting in place further safeguards. Central to operative performance is proficiency, an acquired state, honed by sound teaching, practice and repetition, by which a surgeon consistently performs operations with good outcomes. In cognitive psychology, high surgical proficiency is a state of automatic unconscious processing, with the execution being effortless, intuitive and untiring, as opposed to non-proficient execution, which is characterised by conscious control processing, requiring constant attention and resulting in slow, deliberate execution and inducing fatigue. The transition from one state to the other is better known as the 'learning curve' and is reflected in the hierarchical pyramid of competence (Figure 15.4). This should not carry negative connotations for trainee surgeons, who might be at the conscious processing stage but still perform a perfectly good operation, although it might take longer and be more tiring. Failures in operative technique include: cognitive errors of judgement, such as late conversion of a difficult laparoscopic procedure into an open one; procedural, when the steps of an operation are not followed or are omitted; executional, when, for example, too much force is used, which may result in damage that may or may not have consequences; misinterpretation of anatomy/pathology, which is compounded by minimal access surgery with the limitations of a two-dimensional image; misuse of instrumentation, such as with energised dissection modalities (e.g. diathermy); missed iatrogenic injury either at the time of surgery or diagnosed late.

Figure 15.2 Axial (a) and coronal (b) magnetic resonance images demonstrating a well-defined

abdominal mass with whorled stripes in a fluid-filled central cavity (arrows). This 60-year-old woman had had an abdominal hysterectomy 10 years previously and presented with pyrexia and flank pain. The cause was due to the late presentation of a retained surgical swab. Figure 15.3

Endoscopic retrograde cholangiopancreatography radiograph showing an iatrogenic bile duct injury.

Unconscious Right intuition competence Conscious competence Right analysis Conscious incompetence Wrong analysis Unconscious incompetence Wrong intuition Figure 15.4 Hierarchy of competence.

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