

# Psychiatric Issues in Surgical Patients Part I: General Issues

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*Psychiatric disorders are quite common in surgical patients. However, surgeons are less likely to refer patients to psychiatrists than other physicians, who also have a tendency to under-recognize psychiatric disorders among their patients. Therefore, a large proportion of psychopathology in surgical patients is either undiagnosed or misdiagnosed and not optimally treated, if treated at all. This column focuses on common psychiatric issues that generally arise in surgical patients and reviews psychiatric issues specific to specialized surgical settings and patients (eg, burn units, obesity surgery).*

In the preoperative period, surgeons frequently request psychiatric consultation regarding several common psychosocial issues, including informed consent and assessment of the patient's decision-making capacity (most often requested when patients refuse diagnostic procedures or surgery) as well as the presence of disruptive symptoms and behaviors reflecting underlying psychopathology. Surgeons tend to under-recognize psychiatric disorders until they interfere with evaluation and treatment. Preoperative anxiety and health-related phobias, such as fear of anesthesia, needles, sight of blood, and contamination from blood transfusions, are common in surgical patients. Psychiatric consultation may focus on the discontinuation of antidepressants prior to general anesthesia administration and how to give patients psychiatric drugs when they are temporarily unable to take medication orally.

Anxiety disorders, depression, bipolar disorder, schizophrenia, and personality disorders may all flare up during the post-operative period, leading to psychiatric consultation. Other

common general post-operative issues include complications related to alcohol abuse, dependence, and withdrawal; pain management in opioid-dependent patients; the presence of personality disorders and other causes of lack of cooperation; and post-operative delirium. Posttraumatic stress disorder (PTSD) is also common after surgery, particularly after traumatic injuries, but is underrecognized and undertreated. Previous research has evaluated these and other issues in surgical patients.<sup>1,2</sup>

## **General Preoperative Issues**

### **Capacity and Consent**

Informed consent is ethically and legally required before a patient receives surgery, and operating without consent may be considered civil or possibly criminal assault and battery. Elements of informed consent include the patient possessing sufficient decision-making capacity; voluntary decision making (free from coercion); and sufficient information having been provided to the patient. Competent patients have a right to decide whether to accept or reject proposed surgery, even if life-saving. When the patient is not capable of informed consent and does not refuse surgery, surgeons seek permission from next of kin or a legally designated surrogate. Only the court can legally declare a patient incompetent, but psychiatric consultants can evaluate the patient's decision-making capacity. Frequently, when psychiatric consultation is requested to determine the capacity of a patient refusing surgery, the reason for refusal is different (eg, insufficient information provision to the patient, fear, or emotional unreadiness).

### **Preoperative Psychiatric Evaluation and Psychiatric Disorders**

Often, a patient's psychiatric history is not obtained or considered until problems arise post-operatively. A reason for under-referral of surgical inpatients is under-recognition of psychological distress by the surgical team. In some cases, surgical inpatients have felt the need to refer themselves for psychiatric evaluation, even if the surgical staff does not consider their anxiety sufficient to warrant a consultation. A psychiatric history should be routinely obtained during the general preoperative evaluation and as an outpatient prior to admission when the surgery is elective. Disorders may flare during the post-operative period, and abrupt discontinuation of psychiatric medication due to oversight or the patient's inability to take oral medication for a sustained period of time, adds to the risk of psychiatric disorders relapse as well as symptoms of medication discontinuation. Warning about certain personality disorders and traits enables surgeons and nursing staff to more effectively manage patients throughout surgical hospitalization. Conversely, inappropriate or premature psychiatric consultation is requested in some circumstances when a patient expresses normal feelings (eg, being to cry) that the surgeon finds uncomfortable.

Given the high prevalence of depressive disorders in the general population, it is unsurprising that a high percentage of patients undergoing surgery are taking antidepressants. Previously, when monoamine oxidase inhibitors (MAOIs) were more frequently prescribed, it was common practice to discontinue antidepressants prior to general anesthesia. This question is sometimes raised today. It is not necessary to discontinue non-MAOIs before general

anesthesia and doing so increases the risk of relapse and discontinuation symptoms, which can complicate post-operative recovery. However, it may be necessary to discontinue anticholinergics (eg, amitriptyline) in some patients who develop post-operative delirium or ileus.

Management of schizophrenic patients who require surgery can be complicated. Bizarre speech, behavior, and expression by schizophrenic patients can make surgical physicians and nurses uncomfortable, leading to patient contact avoidance. Patients with paranoid delusions may refuse surgery due to the psychotic misperception of the nature of the operation and/or the surgeon's intentions as well as refuse blood transfusions or unfamiliar medication. Thought disorder and concrete reasoning may cause difficulties for schizophrenic patients in understanding medical information, thus potentially interfering with the consent process (and post-operative instructions to the patient). Some physicians are overly wary of operating on schizophrenic patients. Patients with well-controlled schizophrenia are often more passively cooperative throughout surgical admissions than many "normal" patients.

Stress from surgery may psychologically and physiologically destabilize bipolar disorder, and acute relapse into mania in the post-operative period can be extremely disruptive to care, even life-threatening.<sup>1</sup> Patients unable to take oral medication for prolonged periods pre- or post-operatively (eg, recurrent abdominal abscesses and fistulae) cannot receive lithium, antidepressants, some antipsychotics, and most anticonvulsant mood stabilizers. During this time parenteral antipsychotics serve as the primary choice for mood stabilization (although valproic acid can be given intravenously as well). For patients taking medication orally, it should be noted that lithium poses a safety issue for those with rapid fluid shifts (eg, acute burns).

## **Preoperative Anxiety and Phobias**

The modern informed consent process may make anxious patients even more so, particularly if handled unempathically. Appropriate empathic provision of information about surgery can reduce preoperative anxiety, post-operative pain, and hospital stay length.<sup>1</sup> While benzodiazepines are frequently prescribed (and may be useful) for preoperative anxiety, they are not a substitute for the provision of adequate information. Patient education (and, where appropriate, for the partner or family as well) and social support are often more effective than medication in reducing preoperative anxiety and have additional post-operative benefits.

Health-related phobias are common but often unknown to the physician, in part because patients are reluctant to report phobias. Fear of needles is one of the most common phobias and may first become evident in the preoperative period. Approximately 8% to 10% of adults have unreasonable fears of needles that may interfere with treatment. Primary focus of fear may be needle and injection itself or the sight of blood. This phobia appears to be partly inherited (especially the vasovagal response that may result in fainting) and partly learned from conditioned responses, including past fainting spells when injected or after watching others receive injections. Classical behavioral therapy techniques are effective for needle phobia in motivated patients, but if the phobia is discovered prior to surgery, therapy cannot be rushed.

Closely related to fear of needles and/or the sight of blood are contamination fears, such as the fear of contracting human immunodeficiency virus or hepatitis from blood transfusions (a

very rare occurrence) or from needles contaminated with blood (although this should never occur, outside of impoverished areas). Correcting misconceptions and providing accurate information can be reassuring, but clinicians should remember that an explanation will not make patients overcome intense phobias. In addition, patients refuse transfusion due to religious beliefs (eg, Jehovah's Witnesses).

Close to one-third of patients are afraid of anesthesia as distinct from the operation itself, with some patients fearing that the anesthetic will prematurely wear off or that they will not awake from the anesthesia. Another common fear is that of awaking on a ventilator, unable to move or communicate.

## **General Post-Operative Issues**

### **Alcohol Abuse and Dependence**

Alcohol abuse and dependence are commonly found in surgical patients. A reason for this finding is the role of alcohol in traumatic (eg, motor vehicle collisions, falls, fighting, hunting accidents) and self-inflicted injuries (eg, gun shot wounds). Alcohol is also a major risk factor for many diseases that result in the need for surgery or surgical evaluation (eg, gastrointestinal cancers, peptic ulcer, cirrhosis, pancreatitis).

An alcohol history is frequently unobtainable from acute trauma patients due to injury (which may include traumatic brain injury), shock, subsequent endotracheal intubation, and paralysis, as well as from patients with other surgical emergencies. When possible in acute circumstances, available family members should be asked about the patient's alcohol use. In both these emergent circumstances and in patients who falsely deny alcohol abuse, alcohol presence may be suggested by a past history possibly representing complications of alcoholism (eg, gastritis, pancreatitis, frequent prior accidents) and/or certain routine laboratory test results (eg, elevation in red blood cells mean corpuscular volume or liver enzymes, especially  $\gamma$ -glutamyltransferase).

Chronic alcohol intake may increase or decrease effects from anesthetics depending on the amount of alcohol ingested, relative affinity for the anesthetic for particular hepatic microsomal enzymes, and severity of any underlying liver disease.<sup>3</sup> Development of an alcohol withdrawal syndrome in the perioperative period may change an expectedly benign surgical course into a life-threatening one, with seizures, aspiration, delirium, and cardiovascular collapse. In addition, alcohol misuse is associated with nutritional deficiencies, cardiomyopathy, neuropathy, greater risk for a variety of infections, impaired healing, and higher risk for bleeding (due to coagulopathy from liver disease and platelet dysfunction). Alcohol dependent patients are more likely to leave the hospital prematurely against medical advice and less likely to adhere to post-discharge instructions, medication, and post-operative follow-up visits. With all of these potential adverse effects of alcohol on surgical outcome, it is unsurprising that alcohol abuse is associated with higher surgical morbidity and mortality (although some investigators have not found significant differences in surgical outcome in patients with excessive alcohol intake).<sup>4</sup>

In the past, it was not uncommon for hospital formularies to carry alcoholic beverages and intravenous alcohol for prevention or treatment of alcohol withdrawal, and this practice

mainly occurred on surgical services. This practice continues in some hospitals and is ordered almost exclusively by surgeons.<sup>5</sup> However, using alcohol to treat alcohol withdrawal is an archaic practice that should no longer be used because of its potential toxicity and it undermines the message of abstinence given to patients.

## **Opioid Dependence**

There is no evidence that providing appropriate doses of opioids for post-operative pain in the hospital creates addiction, yet some physicians and nurses are cautious and undertreat postoperative pain. In addition, some patients fear becoming addicted and reduce use or underuse opioids following surgery. The practice of surreptitiously using a saline injection to discover if a patient suspected of drug-seeking actually needs pain medication is ethically and clinically inappropriate, yet continues to be performed in some surgical wards. As there is a high placebo response rate even for acute pain, a positive response to a saline injection does not provide any information about the nature of the patient's pain, and such practices are dishonest and undermine patients' trust in their treating physicians and medical staff.

If a surgical patient is receiving methadone maintenance, the dose used for maintenance should be continued throughout the surgical hospitalization, and additional shorter-acting opioids prescribed for pain, preferably on a fixed schedule.<sup>6</sup> Patient-controlled analgesia can be used safely and effectively in opioid-dependent patients, with higher bolus doses and shorter lock-out intervals as the recommended strategy.<sup>7</sup> Because opioid-dependent patients have developed tolerance, they require a higher opioid dose than other patients. When such patients are given typically used doses, they may complain of not receiving enough medication, thus are inappropriately labeled as "drug-seeking," when they are being undermedicated. This is particularly an issue with patients who are maintained on high dose buprenorphine rather than methadone, because buprenorphine is a mixed opioid agonist-antagonist and can block the effects of other agonists.<sup>8</sup>

## **Post-Operative Delirium**

Post-operative delirium is very common, particularly in elderly patients undergoing hip replacement, major abdominal surgery, or cardiac surgery. Up to 40% of elderly orthopedic surgery patients experience delirium.<sup>9</sup> Delirium rates of 25% to 40% were common following open heart surgery 40 years ago,<sup>10</sup> but have fallen significantly with improvements in heart-lung bypass and techniques for minimizing its use. Risk factors for post-operative delirium include older age, alcohol abuse, pre-existing cognitive dysfunction (particularly dementia), sleep deprivation, malnutrition (particularly hypoalbuminemia), duration of anesthesia use, type of anesthesia, certain medications (eg, sedatives, anticholinergic drugs), second operation, pain, and hypoxia.

Post-operative delirium (excluding emergence from anesthesia) appears to be most frequent on day 3 and typically resolves within a week. Delirium is often not diagnosed, or misperceived by medical staff as a psychiatric disorder (hypoactive delirium as depression, hyperactive delirium as schizophrenia, or personality disorder). Treatment of post-operative delirium follows the same principles as for other deliria.<sup>11</sup>

## **Posttraumatic Stress Disorder After Surgery**

PTSD is most common in trauma surgery patients (eg, victims of burns, motor vehicle collisions, industrial accidents, or assaults), but a significant percentage of patients also develop PTSD following other operations when the post-operative course is prolonged and complicated. Approximately 25% of patients receiving surgical treatment for secondary peritonitis develop PTSD symptoms.<sup>12</sup> More surgical patients develop some PTSD symptoms than the full syndromal PTSD. The severity of the injury or the illness requiring surgery is not correlated with the development of PTSD.<sup>13</sup> Some patients with no apparent predisposing factors develop PTSD. PTSD appears to be less common in patients who were intoxicated or had a concussion at the time of the traumatic injury, possibly due to impaired memory of the event. PTSD symptom onset is variable in part depending on whether the major traumatic stressor was the injury or hospital experiences. As with PTSD following other traumatic events, the best predictor of the disorder is the presence of acute stress symptoms during the surgical hospitalization. Most post-operative PTSD symptoms decrease by 1 year, but some patients continue to experience chronic symptoms (eg, those with disfiguring burns). Diagnosis of acute stress disorder can be difficult in post-operative patients who have delirium, and in current practice patients are discharged soon after surgery and acute stress symptoms are missed.

Treatment of PTSD in surgical patients follows the same principles as in other patients with PTSD.<sup>14</sup> **PP**

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