The Operative Period

As every medical student discovers, the operating room is a unique and initially alien environment. The rules of antisepsis, order and discipline combined with the use of highly technological operating, monitoring and anesthetizing equipment often leaves students feeling somewhat anxious during their first experiences there. Imagine the anxiety the patient who is outside the medical care system must experience.

The patient's operative anxiety begins on the ward with the injection of preoperative medications. Despite sedation, some patients experience acute anxiety at being moved to a gurney and wheeled down the hall through automatic doors into the operating room, a very sterile, strange smelling and cold sanctum. Once in the operating room, the patient is surrounded by unidentified people in masks and caps and the lumpy sameness of the operating room uniforms. Obviously kind and reassuring words from the patient's surgeon, and if feasible the primary care physician, will lessen the anxiety as the patient is transferred to the peculiar-looking operating table. The anesthesiologist, who has met the patient, explained the anesthesia, and ideally established some rapport, can also help to reassure the patient.

Whether a patient under general anesthesia experiences any awareness has been debated throughout this century. After curare was introduced into anesthetic practice in 1942, cases of insufficient anesthesia and resultant awareness in surgery were reported. Although studies have shown intra-operative recall to be rare, the fact that some patients could remember the operative period should be a warning that what is said and done during the operation may be recalled and could have an adverse impact on the patient postoperatively. For the few patients who have recall, mistaken or intended jokes or sarcastic remarks could lead to genuine traumatic neurosis following surgery.

Once the surgical procedure is completed, the patient has new adjustments to make. Assistance will be appreciated in making minor adjustments; for major changes the situation must be well orchestrated to ensure the best possible outcome.

The Postoperative Period

The postoperative period begins when the patient leaves the operating room, and it ends with recuperation and rehabilitation. Because the types of psychosocial and psychiatric problems seen vary with the length of time since the operation, the postoperative period has been divided into acute, convalescent and rehabilitative phases.

The Acute Postoperative Phase

The immediate postoperative phase begins with completion of the surgical procedure, transfer to the recovery room, and emergence from general anesthesia. It ends when the patient has stable vital signs and is transferred back to the surgical floor.

Two of the most dramatic postoperative sequelae, delirium and pain, are associated with major surgery performed under general anesthesia, although postoperative pain (commonly) and delirium (occasionally) also follow operations performed under spinal or local anesthesia.

Postoperative Delirium: Postanesthesia delirium occurs in patients who have had a general anesthesia. Although patients differ in the way they emerge from general anesthesia, a fluctuating level of consciousness is universal. Early on in the recovery room, patients experience reduced awareness, disorientation and impaired cognitive functioning. Often patients have impaired communication, comprehension and interpretation. The patient emerges from unconsciousness in a very unusual and restrictive environment. As Kimball has pointed out, every sense organ is bombarded: hypothermia, peculiar smells, the taste of metal and plastic tracheostomy tubes, the beeps of monitors and the harsh fluorescent lights. All this occurs in the midst of the activities of unfamiliar physicians, nurses and other personnel.

The peculiar environment of the recovery room must be explained to the patient, and he or she needs to be oriented and reassured. Simple statements may have to be repeated several times because of the patient's reduced and fluctuating awareness and tendency to misinterpret. This is not the time to discuss the results of surgery, especially if the news is bad. Focus should be on the present. "You are in the recovery room." "I'm your surgeon, add name." "I'm your nurse, add name. How are you feeling?" Often as consciousness returns, the patient answers this last question with reference to pain. In fact, even before he responds verbally, you will see grimacing and other signs that the patient is in pain.

Nearly all patients will gradually regain a conscious state without remarkable incident, but a few will experience behavioral difficulties varying in extremes from wild and agitated excitement to states of withdrawal and unresponsiveness. It is as if the profound disruption of mental activities caused by general anesthesia does not remit and symptoms associated with an acute organic brain syndrome continue. Abnormal perceptions, such as delusions, often persecutory in nature, and hallucinations, characteristically visual, are not uncommon. Labile emotions and memories expressed apparently out of context are also observed. The patient remains disoriented and very difficult to care for.

Other patients experience a postoperative delirium, or (as others have called it) a postoperative psychosis after a lucid period of one to three days. This usually clears within 24 to 48 hours, but it may last up to a week or two. Many of these patients have other postoperative complications and are in the ICU.

---

Dr. Rosen is director and Dr. Herrera associate director, Consultation/Liaison Service, Department of Psychiatry, University of Rochester Medical Center. Dr. Schwartz is director, Consultation/Liaison Service, Kaiser Hospital, South San Francisco, Calif.; Dr. Prescott is superintendent, St. Elizabeth's Hospital, Washington, D.C.
This delayed form of postoperative delirium or psychosis, very similar to ICU psychosis or syndrome, is probably due predominantly to environmental factors while the postoperative delirium that occurs immediately upon anesthetic emergence is thought to be caused primarily by physiological factors. Nevertheless, in both cases physiological and environmental influences are at work. Advancing age, surgical stress (procedure lasting more than four hours), whether the operation was an emergency, transfusing over two units of blood, and postoperative complications have all been implicated as having anesthetic agents such as cyclopropane and ether, and postoperative drug withdrawal, particularly from alcohol. Metabolic factors such as alkalosis, anemia, azotemia, hypercalcemia, hypochloremia, hypoproteinemia have all been associated with a higher incidence of delirium. Cerebral anoxia is likewise important and may be the basic disturbance in many postoperative deliria.

Surgery on certain organ systems seems to make the patient particularly vulnerable. Bilateral eye patching often produces "black patch psychosis." Hysterectomies and orthopedic procedures such as hip pinnings are thought to be more likely to produce postoperative delirium, and cardiac surgery is notorious for it.

A person with a history of psychosis or delirium is also more likely to experience postoperative delirium. Emotional disturbances preoperatively, such as extreme anxiety, paranoid traits, depression and insomnia, and psychophysologic disturbances as well as a history of previous psychiatric treatment have all been associated with higher incidence of postoperative delirium. A family history of psychosis is more frequent among patients with postoperative delirium or the delayed postoperative psychoses.

ICU environmental factors that seem to contribute include: (1) simultaneous sensory overload and monotony, (2) sleep deprivation, (3) a sense of timelessness, (4) lack of privacy, (5) restriction of movement, (6) disruptive communication, (7) lack of familiar objects and regular mealtimes and (8) the multiplicity of staff who deal with the patient.\(^4\)\(^5\)

Persistent postoperative delirious state or the postoperative delirium or psychosis that occurs after a lucid period can be prevented. However, if not prevented, caring for the patient with difficult and complicated postoperative deliria involves much understanding, patience, and a comprehensive approach to the treatment of acute symptoms.

Prevention involves treating withdrawal syndromes prior to surgery, correcting physiologic parameters, and discontinuing all medications except those absolutely necessary. It also involves recognizing and addressing psychological symptoms preoperatively, and providing realistic explanations and reassurance to patients pre- and postoperatively. Finally it involves a more sensitized and less disruptive intensive care unit environment— avoiding sensory distortion and continued orientation of the patient, emotional support by the same medical and nursing staff as often as possible, visits by family members and instructions transmitted in simple, clear, direct statements. If agitation is extreme and cannot be controlled by other means, small doses of antipsychotic medications (preferably a nonphenothiazine such as haloperidol) may be necessary.

**Postoperative Pain:** In observing and caring for the patient in acute postoperative pain, we have the opportunity to participate in one of the oldest and most central activities of the practice of medicine: to relieve suffering. We also have the opportunity to observe the incredibly wide variation in human response to the highly subjective sensation of pain. It is nearly impossible to describe pain adequately to someone else unless that person has also experienced the same or a very similar kind of pain.\(^6\)

Injured soldiers in combat, when compared to a group of civilians with similar injuries, often denied the presence of pain and required far less analgesic medication. The soldiers actually responded to the wounds with relief and even euphoria because they represented escape, alive, from the battlefield. To the civilians, the wounds were perceived as very negative and depressing events.\(^7\)

High variability in analgesic medication requirement is also found postoperatively. Marks and Sachar\(^8\) studied prescribing practices and found that physicians consistently undermedicate patients in pain because of both incomplete understanding of the actions of the analgesic agents and fear of producing an addiction syndrome. Current notions of pain control are tending toward allowing the patient to choose the interval between doses. This seems to result in better analgesia and actually less use of total medication.

All too often when a patient asks for better analgesic, the physician attempts to confirm the need with a placebo. Studies conducted transculturally indicate that about one-third of whatever population is studied will respond favorably to placebos irrespective of personality or other variables.\(^9\) A placebo-positive patient is fortunate in that he or she can safely use nonaddicting agents with considerable success, often over a long period of time. This interesting observation confirms that the mind has a powerful influence over the body's physiology, including raising the pain threshold.

**The Convalescent Phase**

This phase, which begins once the patient has stabilized following the immediate effects of anesthesia and the operation, is characterized by wound-healing and recuperation. The patient is usually on a surgical ward, sometimes on a medical or pediatric ward. During this time the patient begins to recognize the long-term effects of the surgery. Disabilities must be acknowledged and the effects of these disabilities on life style must be dealt with realistically. For the first time the patient may realize the need to adjust to a prosthesis, an inoperable tumor, a chronic illness with disability and/or the necessity of taking medications for the rest of his or her life.

Initially the patient may be apprehensive about being "evicted" from the surgical intensive care unit where he or she was constantly monitored and never alone. Once on the surgical ward, patients who have undergone surgery for serious illnesses will often appear quite depressed. This is especially true for patients who have undergone open heart surgery. They may become quite withdrawn, uninterested in relating to family or ward personnel, or
they may complain a great deal about their care and surroundings. Engel has described this phenomenon as conservation-withdrawal. Schmale has elaborated on the adaptive value of conservation-withdrawal and even depression following surgery as well as other types of loss of body part or function. This can be time for adaptation, rest and, potentially, healing and renewal. Also during this time family members begin to express their own anxieties and fears and begin to show signs of fatigue from the whole ordeal.

The difficult, painful and sometimes frightening task of mobilization and ambulation occurs in the early part of convalescence, often while the patient feels depressed and withdrawn. The result is what sometimes seems like poor cooperation and occasionally regressed and rather infantile behavior.

It is important for all of us as caretakers to reflect for a moment and imagine how frustrating and depressing it must be to feel so helpless, to experience severe pain, and to feel such uncertainty about the future because the full consequences of the surgery have not yet been grasped. Add to this the demands for painful mobilization, ambulation and coughing, and one has all the psychological ingredients to produce angry, regressed and uncooperative behavior. It seems a monument to human resiliency that so many do so well under these trying circumstances.

The point is that psychiatric consultation is not usually needed. What is more helpful is understanding emotional support and unwavering encouragement. As a matter of fact, those patients who remain overly docile may well be the ones who end up clinically depressed and in need of psychiatric consultation.

Grief over Loss: As physiological recuperation progresses and the patient gradually feels better physically, the difficult psychological task of grieving for what has been lost, or what might have been, begins in earnest. Grief over loss involves four major psychological tasks, not always occurring in the exact sequence but frequently overlapping. As a general scheme, denial of the loss is usually observed first, followed by ventillation of affect, then a working through of defenses with acceptance, and finally rehabilitation.

Surgeons, other physicians, medical students and nurses can greatly facilitate these tasks, particularly the last three. And they can also assist with the denial phase by respecting it, as long as it doesn't interfere with adequate medical care. Once again, what is most helpful is understanding, emotional support, genuine concern, family involvement and occasionally gentle confrontation. Information sessions concerning sexual relations, diets, medications and levels of activity to be anticipated at home and work are often reassuring.

Later in the convalescent phase, the patient may become anxious at the prospect of leaving the hospital. He may feel insecure about the less intensive level of care available at home. It is not unusual for many patients to request a longer stay, sometimes in a regressive angry manner. Again, it is important to recognize that this is a normal psychological response to the threat of separation from one's caretakers and the fears of going home and confronting issues of the ability to function adequately at home, at work and being on one's own again. So it would be much better for the surgeon and the primary care physician to listen, be understanding, accepting and supportive rather than to consider the patient psychiatrically disturbed at this moment.

The Rehabilitative Phase

This phase begins with the patient's first attempts to deal with the permanent sequela of his or her surgical outcome. The adaptations that need to be made are often biomechanical as well as psychosocial. The patient may need to learn how to walk again as well as to adjust psychologically to the fact that he will no longer be competitive in sports. The surgeon is not usually involved in this phase of adjustment but can smooth the way by not peremptorily dismissing the patient to another physician's care. Because many patients fear abandonment at the time of major illness necessitating surgery, a caring transition to follow-up care is essential. It is critical to work with the primary care physician and facilitate the transfer of care and to work with the family and other support systems. Likewise, their understanding and cooperation in rehabilitation is needed for an effective transition.

Self-help groups organized by patients who have undergone similar surgical experiences have proved quite useful to many patients. Among these are groups for patients who have undergone mastectomies, "ostomy" clubs, and The Mended Hearts Society.

Unrealistic expectation may lead to severe disappointment and clinical depression. Anxiety about illness and feared disability may result in inability to return to work and domestic roles and may require psychiatric intervention or expertise for treatment. We should remember that grief reactions to incapacitating surgery, such as cardiac operations and amputations, may last well into the second postoperative year, and it may therefore be necessary to follow these patients for a number of years to prevent, and if necessary, to treat toward psychological sequelae.

Clinical Vignettes

Now let us return to the three patients that we discussed preoperatively in last month's TNP and illustrate how each of the postoperative phases relates to these individual patients and their postoperative outcomes.

Patient I

As you will recall, Ms. Abbott is a 54-year-old recently widowed woman with insulin-dependent diabetes mellitus who was referred to surgery because of right-sided rib pain of two weeks' duration. This patient was depressed and afraid that she had cancer, although there was no evidence for this. She had repeated dreams of dying and joining her husband who had died in a boating accident six weeks prior to her hospitalization.

The patient's affected rib was surgically removed without difficulty. However, prior to leaving the operating room she developed severe hypotension and was transferred to the surgical ICU where her condition progressively worsened. The medical staff, despite all efforts, could not stabilize her blood pressure. She went into cardiogenic shock, became decerebrate, and died within 24 hours.

The sad lesson of this tragic case is to take preoperative depression seriously. Patients who are psychiatrically disturbed with related somatic symptoms should not be operated upon unless it is an emergency.

Patient II

Mr. Atrala is the 8-year-old married retired mechanic who was to have some polyps removed from his colon. When his physician said these "looked cancerous," he thought that his doctor had given him a "death sentence." He had become fearful after he had expressed his own concerns about having cancer and his worries about the impact his illness and surgery would have on his wife who was also ill. After clarification the patient learned that there was only a small chance that these polyps might be cancerous, and he went into the operation with much less anxiety.

Mr. Atrala went through his operation without complication and he recovered quickly. The medical student was in the recovery room with the surgeon. As soon as Mr. Atrala realized where he was after initially reporting that he was dreaming, he recognized his student-physician and surgeon and was relieved to see them there.
The medical student had already prepared the patient for the recovery room and had even shown it to him, so this was an expected environment. He was reassured when introduced to his nurse. He quickly oriented himself to the environment and in response to the student-physician’s asking him how he was feeling, he answered in a stolid manner, “Fine, but it hurts.” Mr. Ariala’s wife was able to have a brief visit with him in the recovery room, which calmed her and subsequently calmed the patient because he had been worried about the impact of his surgery on his wife.

After a short stay in the recovery room, Mr. Ariala was taken back to the surgical floor where his wife was waiting for him. His medical student also was there and kidded him about his steak dinner that he would have as soon as he recuperated. The patient then wanted to know about the results of the surgery. His student-physician, who knew the results of the frozen sections, told him that he did not have cancer. The patient, his wife and the student rejoiced in their own quiet ways. This patient’s stay in the hospital was briefer than most. He also required less pain medication than most patients.

This again underscores the importance of clear communication, careful explanation, emotional support prior to surgery and the importance of that personal connection between the student-physician, physician and surgeon with the patient and his spouse and family. Shortly after the student had shared this information with Mr. Ariala, his primary care physician who came to visit shared his pleasure about the good news. Later, his surgeon came by and reviewed the whole experience with him and said how glad he, too, was about the outcome. Mr. Ariala thanked his surgeon and all his caretakers for the excellent job they had done in preparing him for and carrying out the surgery.

The last night that Mr. Ariala was in the hospital, the medical student made good on his wager and provided him with a medium-rare T-bone steak with all the trimmings. On this good note. Mr. Ariala thanked his student-physician and the next day began his rehabilitative phase.

Typically for Mr. Ariala, he chose to go back to work as soon as he could in his neighborhood senior citizen’s center where he chose to counsel ill people, especially those who were going to have surgery.

Patient III

Ms. Semka is the 28-year-old attorney who discovered a lump in her left breast, which she ignored until her physician-boyfriend noticed it a month later. He encouraged her to see a surgeon that he knew and respected. As you may recall, the patient was very fearful that she might have cancer. She only consented to surgery after the surgeon agreed to remove the lump and leave her breast even if she had cancer. She was very upset and broke down and cried several times. Fortunately, she was able to relate with her medical student who was a woman about her age. She was able to express some of her feelings, but she seemed frustrated on keeping her breast at all costs. The medical student was also concerned because the patient’s boyfriend visited her infrequently, and seemed detached and anxious. The patient was distressed and depressed about his response. However, she did not want the medical student to talk with him. This request was honored as was her desire not to inform her parents.

Ms. Semka went through the surgical procedure without complication. The breast mass was removed, and frozen section determined that she did have an adenocarcinoma of the breast, but because of the patient’s request, no further surgery was performed. She emerged from anesthesia as if waking up from a nightmare. She was unexpectedly disoriented, but also agitated and screaming at times. She had fears that she was in prison and that the staff around her—including the woman medical student—were trying to harm her, to torture her. The medical student kept reassuring her, “You are in the recovery room. I’m your student doctor. This is your nurse. You’ve just had your surgery. It’s noontime.” Gradually the patient responded and calmed down, but the look in her eyes of fear, of an inner knowledge that she had what she did not want to have remained. After her vital signs were stabilized, the medical student escorted her back to her room on the surgical floor and asked her how she was feeling.

The patient responded very hesitantly, “Not so good.”

Finally she looked right at the medical student and said in a very angry, even hostile, way, “I’ve got cancer. Haven’t I?”

The medical student, shocked by her aggressive statement, answered immediately without thinking, “Yes, you do, but it’s not the end of the world.”

Ms. Semka covered her face with her hands and started to cry. She then yelled at the student, “Yes, it is. It is the end of the world. Get out of here!” The medical student stayed for a while, but left when the patient screamed again, “Get out.”

The medical student felt horrible. She wondered if she had said the wrong thing. She also empathized with her patient, trying to imagine what it would feel like to know that she had cancer of the breast at age 28 when just beginning her career. The medical student conveyed what had happened to the nursing staff and her surgeon. All agreed that they needed to be understanding and accepting of Ms. Semka’s emotions, and one or more of them would be able to reach and relate to her. Once the medical student got some distance from the situation and understood that Ms. Semka was very angry and appropriately so, she knew it was valuable that the patient could express it. However, she hoped that after this wave of anger the patient would again respond positively to her outstretched hand.

The next day Ms. Semka remained angry and hostile; she seemed extremely withdrawn and depressed. She would not relate to anyone. After a conference on the ward, the surgeon suggested that they request a psychiatric consultation because he had seen several young patients like Ms. Semka develop a profound depression post-operatively and in retrospect wished that he had called in expert help sooner. The medical student was reluctant to go along with this, but after another day of Ms. Semka’s hostile depression, with the situation only getting worse, she agreed. Ms. Semka wasn’t eating; she wasn’t sleeping well; and her physician-boyfriend, who seemed unable to deal with what was happening, had essentially removed himself.

When the medical student asked her if she would like to see a psychiatrist, Ms. Semka exploded, “Now you think I’m crazy. Well I’m not and I’m not seeing any psychiatrist.”

The surgeon, who was there, said with concern and firmness in his voice, “I want you to see Dr. Kolmer. He works closely with us and I’m sure you’ll find it helpful to talk with him. You have got to come to terms with the fact that you have breast cancer and decide what to do about it. As you know, I recommend that you have a mastectomy.”

Ms. Semka seemed stunned. Instead of screaming, “Get out of here. I won’t see Dr. Kolmer,” she started crying. The medical student tried to comfort her but Ms. Semka jerked away from her hand.

The next day, Dr. Kolmer knew he had his work cut out for him. He introduced himself and said that he had been asked to come by and talk with her.

Ms. Semka said, “I know but I didn’t want to see you.”

“Well since I’m here, why don’t we talk for a while.” He sat down and said, “You’ve been through quite an ordeal. How are you holding up?”
1986 Directory of Psychiatry Residency Training Programs

Ms. Semka started crying again. "I'm not. It's useless. After getting everything I wanted—an excellent job with a prestigious law firm and I just started living with a young doctor—now this. Why me? It's just not fair." Ms. Semka talked for a long time about not wanting her breast removed. She said she'd rather die. In fact, she had thought about suicide several times. She felt so alone and abandoned, but she also knew she had pushed her boyfriend away, which wasn't hard to do as he was also having trouble accepting that she had breast cancer. She equated having a mastectomy with losing her femininity and sexual identity. She felt that without a breast she would be unacceptable to herself and her boyfriend. She thought death would be better than being mutilated and being, as she put it, "a freak."

Dr. Kolmer knew that her reaction was not unlike that of many women with breast cancer. He told her about a self-help group of women who had had mastectomies. He said he would give her the name of a woman to talk with from the group. He asked if he could talk with her boyfriend about their meeting. She agreed and was also accepting of the possibility that the three of them would meet and talk. Dr. Kolmer suggested that Ms. Semka contact her parents and talk with them about the situation.

Dr. Kolmer talked with the medical student and the surgeon about his interview with Ms. Semka. They were pleased that she had talked so openly with him and agreed to involve her boyfriend. The consultation facilitated a positive outcome. Dr. Kolmer did talk with the boyfriend separately and with Ms. Semka. She did contact her parents who, with the boyfriend and the women from the self-help group, all became supportive figures in helping Ms. Semka decide to have a mastectomy. Her operation went well and fortunately she had no positive lymph nodes. Within four months she was back at work, and the following year she married her physician friend.

It is not by chance that Ms. Semka was depressed and suicidal. The loss connected with losing an important body part is like a death. During the grieving process the feeling of loss and giving up may be generalized to one's whole being. The wounded part becomes the wounded person who, like the diseased tissue, becomes devitalized, helpless and hopeless. Part of our professional work is to help patients realize that when they experience loss and depression or "partial death" there is opportunity for "rebirth," positive transformation and creative change. It is a central task to help individuals differentiate between loss as "partial death" and total death and to discover through a healing process that overt depression and suicide need not be a solution.

REFERENCES


FIGHT LUNG DISEASE WITH CHRISTMAS SEALS.

AMERICAN LUNG ASSOCIATION
The Christmas Seal People.