Anesthetized surgical patients tune in like radar to the voice of the surgeon and the anesthesiologist, the two people in whose hands their life resides. It is similar to how a mother tunes into the sounds of her baby even in her sleep.

With the increasing evidence that many patients hear and process sounds at an unconscious level during adequate general anesthesia, the protection of the patient from auditory harm becomes a new source of concern. This chapter will summarize our thoughts and experiences regarding the psychological preparation and care of the patient who must undergo surgery.

Preparation

Good preparation for surgery should promote confidence and relieve apprehension. The intent of the surgeon is to take the patient safely through surgery and on to a rapid return to health. This requires the patient’s cooperation during diagnostic studies, removal of doubts and fears that cause stressful anesthetic responses, minimizing drug toxicity from chemoanesthesia, early ambulation, and freedom from post-operative complications. Much of this can be accomplished without hypnosis. However, employing trance and suggestion as tools achieves these desired results more efficiently and consistently.

As previously detailed by Ewin (1984), the best time to deal with physical and psychological post-operative complications is preoperatively. Good psychological preparation for surgery clarifies misunderstandings, explains what is to come, protects the
Preparation Starts with the Referral

Preparation starts with the referral. The pre-operative and prehypnotic suggestion given by a trusted person in the waking state sets the stage. Crile and Lower (1914), as detailed by Ewin (1984), observed that people fearing death from surgery sometimes die. When a patient expresses fears, a good screening technique is to use IM responses to have the patient visualize himself doing well several weeks after surgery. If the patient is unable to do this, then some analytic questioning should be done to determine the reason.

The Pre-operative Release

In my (DME) hospital, the pre-operative release that the patient must sign says:

“I understand and acknowledge that the following known risks are sometimes associated with this procedure and/or anesthesia: death; brain damage; disfiguring scars; paralysis; the loss of or loss of function of body organs; and the loss of or loss of function of any arm or leg.”

My (DME) State law specifies that this meets all the requirements for informed consent.

I (DME) recently saw a male in his twenties who had been on crutches for six months following surgical repair (in another city) of a partial laceration of his Achilles tendon. The repair was solid, but he had a classic Reflex Sympathetic Dystrophy (RSD (now called Complex Regional Pain Syndrome or CRPS), with cyanosis, edema, hyperhidrosis, and severe pain that had not responded to medication or physical therapy.

When we reviewed the original injury in trance, he was relatively unconcerned about the procedure until the nurse handed him the release to sign, and he read the part
about loss of function of a leg, which activated memories of a crippled uncle and visions of not being able to support his family. He did not see his doctor until he arrived in the operating room, and attempted to suppress his own fears.

The etiology of RSD or CRPS is unknown, but in an in-depth psychological study of 10 patients, Thali (1989) notes that, compared to controls, there is a "psychosomatic disposition",

and "the behavior of the medical practitioner has a prophylactic effect".

In presenting the pre-operative release, it seems important to keep the patient in his logical left brain, and away from right brain pictures of these horrors coming true. The doctor is the one who can keep it impersonal and left brain, with something like:

I can't guaranty the outcome of anyone's surgery, but I intend to protect you in every way possible from complications. You know that with surgery and anesthesia there have been reports of almost every problem you can name, including death ... etc., and I have to remind you of that. (pause) Before you sign this consent form, do you have any question you would like answered?

Properly handled, the consent form can be a means to increase trust without causing apprehension (Ewin, 1984).

**The Pre-operative Visit**

The pre-operative visit has been well described (Rodger, 1961; Cheek, 1962; Fredericks, 1980, 2001; & Ewin, 1984). David Cheek (Cheek, 1962, 1994) had many patients review their surgical experiences in trance which yielded information about common fears and reactions to sounds heard under general anesthesia and in the recovery room. His work provides a basis for developing a series of protective suggestions to be
given to the pre-surgical patient.

A good pre-operative preparation in the waking state should be given by all of the physicians that matter to the patient: the referring physician, the anesthesiologist, and the surgeon. It would be ideal if each important physician were trained to employ hypnosis. For example, as detailed by Ewin (1984):

Dr: [Touch the patient and take his pulse.] What do you like for your friends to call you?
P: <Name>.
Dr: May I call you that?

<Comment: It is assumed that the family physician is already calling the patient by his familiar name. However, for the consultants and the surgeon, this question implies that the doctor is asking for a more informal relationship in which the patient can safely confide his feelings without fear of ridicule or censor.]
P: Yes.
Dr: How do you feel about this operation?
P: Okay, I guess.

Extended Comment

One important clue to watch for is the reply "Okay, I guess". The "I guess" is a gratuitous afterthought, and comes from the subconscious, signifying that he would have told a lie if he had only said, "Okay." I (DME) would induce trance in this patient and do an age progression to six weeks post-op to visualize being well by then. If he can picture being well, then just suggesting that it will be that way suffices. If he is unable to imagine recovering, I (DME) use ideomotor signals to search for a cause, and either
resolve it, or defer surgery until it is resolved. Famous surgeons, including William Halsted of Johns Hopkins, are on record as refusing to operate on patients who reported pre-operatively their expectation of death (Finney, 1934), because of the experience that it often came true.

A few years ago I (DME) neglected this preparation in a case of acute appendicitis, and was greeted next morning with a complication of Paralytic Ileus. This is an acute distention of the entire bowel from paralysis due to overactivity of the sympathetic fibers (the ultimate "uptight"). Questioning revealed that when he was a child, his father had died of a ruptured appendicitis, leaving the family destitute. Disjoining this identification in trance, coupled with suggestions of the smell and taste of his favorite food restored normal peristalsis within the hour.

Cheek recommended a pre-operative post-hypnotic suggestion to ignore any sound unless the patient's name is called first. Although he came to believe this was imperfect, though helpful, (personal communication), I (DME) still use it.

Dr: Has there been anything in your mind that you haven’t mentioned, even if it seems silly?

Comment

Any answer should be taken seriously and dealt with fully. Often, it is a thought about something that happened to another person in surgery. It should be emphasized that each person is different, the doctors are different, and that everything possible will be done to prevent any such complication in this case, which is special. The good reputation and history of successes of the surgeon, anesthesiologist, anesthetists, and nurses in this hospital should also be emphasized.
Dr: Would you like for me to help you get relaxed to get a good night’s sleep and to go easily through the surgery tomorrow (or whenever)?

P: [Universal] Yes.

Comment

Ideally, the key physicians and nurses should confer and be aware of each other’s preoperative visits with the patient. If one doctor has taught the patient a self-hypnosis exercise, the other clinicians should reinforce and validate its employment by the patient.

Dr: If you could do anything else you wanted to tomorrow, where would you go for a laughing place?

Comment

Most patients will understand the question (but make sure of it!). It is expected that the patient will respond by relating what he does or likes to do for relaxation (e.g., fishing, boating, watching television, going to the beach), or for diversion. This can be used later for visualization. The patient’s description of his laughing place should be clarified, and reinforced and validated by the clinician.

Checklist of Important Suggestions

Dr: [Induce trance using a rapid induction, then give suggestions such as the following:]

1. You will have an easy day tomorrow if you do what I say.

2. Tonight you should let yourself feel safe and comfortable, sleeping soundly, accepting the fact that you are turning this over to us now.

3. You can help your body heal best by having an attitude that nothing will bother you. Nothing will bother you.
4. In the morning, you won’t want to eat or drink anything, so that all of your body functions will be at rest.

5. When you receive your pre-op injection here in your room, you should empty your bladder and let the sedative take effect while you relax and go to your laughing place.

6. From the time you leave your room until you return from the recovery room, you should simply enjoy your laughing place and completely ignore anything that people say unless you are spoken to directly by name. [Repeat]. Completely ignore anything that people say unless you are spoken to directly by name.

7. When your anesthesia is started, all pain sensation is blocked. Some people hear sounds during their operation, and if you do, you will ignore it because you will be feeling no pain and enjoying your laughing place.

8. You will get a constant supply of oxygen through a small tube in the back of your throat.

9. When the surgery is completed, you will be moved to a stretcher and taken to the recovery room. You will gradually awaken just as you do from natural sleep, relaxed and refreshed.

10. You will keep the arm that is getting IV fluids relaxed and still, and if there is an airway in your mouth when you awaken, simply push it out with your tongue, or remove it with your free hand since you don’t need it when you are alert.

11. You will wake up remarkably comfortable, with a good appetite, and your
normal bladder and bowel functions will resume quickly.

12. You will be up walking later in the day [if appropriate].

13. Whatever you need for comfort will be supplied, and your tissues will heal rapidly.

14. Now, I want you in your imagination just to picture all that I have just told you taking place, and then project ahead in time to when you feel healed and well and ready to leave the hospital. And when you do that, this finger will rise (touch index finger), and a date or the number of days will come into your mind so that you can tell me when it is.

P: Gives an IM and a verbal response.

Dr: [If the date is further into the future than expected, inquire about what seems to take so long, if it could be sooner than that. Work through any issues that need to be resolved or clarified.]

Dr: Now is the time for you to practice going to your laughing place and enjoying yourself, totally free of responsibility, just goofing off. Go to [visual imagery of the patient’s laughing place], and [if true] I’ll see you tomorrow.

**Intra-operative Behavior**

Building on the studies of Levinson (1967), Cheek (1980, 1994), Bennett et al (1985), Goldmann (1988), and others showing that patients may unconsciously hear and process meaningful sounds under general anesthesia, the first International Conference On Hearing Under Anesthesia convened in Glasgow in April 1989, and the proceedings have been published (Ewin, 1989).

Patients under general anesthesia do hear **meaningful** sounds when given by the
person to whom they are attuned (surgeon, anesthesiologist) at an appropriate time in the procedure. The surgical patient naturally has his attention fixed on possible danger. He is alert to anything threatening. Meaningless sounds are ignored. Any statement about his health or prognosis is meaningful and will be noted, just as an attentive mother may be able to sleep through a thunderstorm, but awake when her baby is crying. The person speaking is significant.

How can we protect these patients? Clearly, silence is golden, but regrettably it is next to impossible to attain. Why not ear plugs? This seems to be the simplest solution. However, it is clear in Levinson's (1967) case that there was an EEG alarm during the "meaningful silence" that preceded the planned noxious statement by the anesthetist. Might the patient misinterpret having ear plugs? Only studies will tell.

What about earphones with white noise or music? White noise has been rejected by Breckenridge and Aitkenhead (1983) as "a rather negative approach". Music is appealing, but only if the patient brings his own tapes! Music can have deep emotional associations with both joy and sadness, and only the patient knows his own associations.

Several years ago, I (DME) visited a friend in another state. He was scheduled to do a legal abortion the following morning, and as I had never seen one I asked to look in. He brought his radio to the operating room tuned to a music station. The patient was 17 years old and had a steady boyfriend she expected to marry, but he had abandoned her as soon as he found out she was pregnant. During the procedure (under local anesthesia) the radio played "Love and Marriage - go together like a horse and carriage" and the poor girl cried and cried.

Weinberger et al reported in 1984 that injected epinephrine enabled Pavlovian
conditioning of rats to a sound heard under general anesthesia. This fits with the clinical observation (Cheek, 1981, 1994; Ewin, 1989) that a frightened patient will assign a pessimistic interpretation to any statement that can be so construed, and that in hypnotic review, patients recall mainly comments that would cause fear or anger in the waking state.

With this as a working hypothesis, a few of many negatively interpretable remarks that I (DME) have encountered include, "Look at her heart out here flapping in the breeze" (Ewin, 1984, p.219), "she'll never be the same after this" (Ewin, 1984, p.220, Elman, 1970, p.3), "I'll fix him" (Ewin, 1989).

Levinson (1967) reported a case of postoperative depression following surgery for a benign lesion. In hypnotic review, the patient recalled hearing the surgeon say that it might be cancer, and she recovered when disabused of this idea. Cheek (1965) reported about a 10 year-old boy with shortness of breath and a pulse rate exceeding 120 on exertion, whose patent ductus had been surgically ligated as an infant. At surgery, he was also found to have a small septal defect of no consequence. On hypnotic review, he reported hearing the surgeon say "not able to fix it" (referring to the septal defect). His cardiac evaluation was normal, and after hypnotic review with reassurance, his symptoms cleared.

Perhaps the best protection from conversation in the OR is to reorient ourselves to think as though every patient is under local anesthesia, and fully aware. Since surveys (Breckenridge & Aitkenhead, 1983) show that approximately 2% of patients under general anesthesia can consciously recall conversation (insufficient anesthetic?), and we cannot know when that will
occur, this would be wise even if there were no evidence for unconscious hearing.

With this in mind, we recall Sir William Osler's (1904) admonition that "... in the surgeon no quality takes rank with imperturbability ... coolness and presence of mind under all circumstances ... and the physician who betrays indecision and worry, and who shows that he is flustered and flurried in ordinary emergencies, loses rapidly the confidence of his patients." We need to teach our staff how fragile a frightened patient can be on arriving in the OR.

I (DME) treated a lady whose pain was inappropriately prolonged after an operation by another surgeon. In trance, she said she'd never told anybody, but the only way she had been able to muster the courage to undergo the procedure was to get it into her mind that she would put her complete trust in the competence of her surgeon. She received her pre-medication and as she was being rolled into the operating room on a guerney, she saw a poster that said "How can I soar like an eagle when I have to work with all these turkeys?" and her heart sank.

As a speaker at a nurse’s workshop on chronic pain, I (DME) was asked to do a demonstration. A nurse volunteered who had had a forearm fracture reduced under general anesthesia. It was painful and "never healed", although x-rays showed perfect alignment. During hypnotic review, she recalled that as her anesthesia was about to start, the nurse anesthetist noticed her name on the chart and said, "Oh, you're the nurse who got the job I wanted". In trance, she began to cry and said she felt unprotected, helpless, and frightened. She was given strong reassurance that nothing vengeful happened, and that it was time now to let it heal. She has been pain free for more than five years.

Conclusions
Humans respond to suggestions, both good and bad, at emotionally critical moments. Therefore, we must train ourselves to give our patients good suggestions. Knowing that patients hear under general as well as local anesthesia makes suggestion an important part of every surgical procedure. The patient is able to accept a suggestion at an appropriate time. While the patient is under general anesthesia, the appropriate time to give good suggestions for post-operative comfort is after the main procedure has been completed and while the skin is being closed.

**Recovery Room**

In Recovery, I (DME) have heard the nurse attempting to rouse a patient by saying "Wake up, Mr. X, it's all over". This can be pessimistically interpreted to imply "you're dead," and we think it is much better to be clearly optimistic and unambiguous. I (DME) prefer speaking into the patient's left ear (to access the right brain) something like this:

> Mr. X, this is Dr. Ewin, the operation is completed and you're okay. You can feel comfortable and safe, knowing you're okay. When you wake up, you will be remarkably comfortable, with a good appetite, and all your normal body functions will resume quickly.

**Technique for Recall of Sounds Heard Under General Anesthesia**

Patients with persistent negative symptoms after surgery can be helped to get better using IM review and analysis. David Cheek (1981, 1994) pioneered and developed a reliable technique for bringing to a conscious level what was assimilated at an unconscious level during anesthesia or a concussion. In fact, it could do no harm to conduct such IM review on most post-surgery patients when appropriate as a way to
screen whether everything turned out all right emotionally.

1. In trance, IM finger signals are set up so that one finger will rise to signal the beginning of an episode, another will rise to signal each time something upsetting occurs, and another will rise to indicate the end of the subconscious review.

2. The patient is instructed: *Let your deepest mind review the episode without trying to have any conscious thoughts.* In less than minute, the patient’s beginning finger (usually set up before hand to be the “yes” finger) will rise.

3. If there’s no movement of the “upset” finger before the “end” signal is given, all is well. Expect very little to be reported because what was heard under anesthesia was not meaningful enough to merit the patient’s attention in a state in which his survival mechanisms were alert only to danger.

4. Typically, a patient will initially evince signs of distress (e.g., frowning, defensive posturing, rapid breathing), then the finger signal marking the beginning of the episode, followed by finger signals marking emotionally important occurrences, up through the end of the episode.

5. It typically takes several subconscious reviews before the memory of the experience can be brought to conscious awareness and talked about. The patient is asked to repeat his review at a subconscious level until he can say what he is reacting to. He is reassured that he got through it safely before, and it is all right to simply review the memory as many times as necessary and NOT repress it any longer. Usually two or three subconscious reviews suffice.
6. When signs of distress and upset manifest, **subconscious scanning should be repeated persistently.**

7. When the patient signals that he can bring the material to consciousness, he should be regressed to the episode and instructed to consciously review it while verbalizing what is happening. The number of negative events reported during the episode should correspond to the number of “upset” signals given during the subconscious review. Once brought to a conscious level, the negative ideas that had been fixed in the patient’s subconscious are reframed appropriately.

**Summary**

This chapter described our concept of ideal communication from the surgeon and other key physicians in the light of present day understandings of patients' reactions to both direct and indirect suggestions given before, during, and after surgery. The choices are illustrated with case examples and scientific references.