

The Art of Surgery

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There is a spiritual dimension to the practice of surgery. This dimension has implications for the surgeon and the patient. The physical demands on the patient are enormous. The patient must deal with changes related to body image, significant physical pain, alterations in social relationships, disability and even the prospect of death. How any individual can hold up in the midst of this kind of reckoning is a testimonial to the buoyancy of the human spirit. To be sure the surgeon faces a trial by fire as well. There is psychic tension generated by the intervention itself. Understanding that error can change a person's life permanently or even end it. The surgeon must leave a little bit of spirit behind with each intervention. This transfer of self, given in earnest enables healing to proceed. It is the optimism, perseverance and conviction of the surgeon that imbues the patient with hope. It is the reassuring touch and the caring word that fuels the recovery and simultaneously solidifies the bonds of trust (1). It is this singular fact that underscores the spiritual drain that surgeons endure. For most to continue there must be an acknowledgement of this drain and then a realization that ample time must be allotted to restore the lifeline. To recharge and to restore!

How does this restoration occur? What resources are used to help the surgeon repair a sense of balance and the ability to persevere? What tradition can the surgeon draw from to preserve and enhance this reservoir? Surgeons must draw from the book of life. They must tap the wellspring of family and friends that provide support for many. Uncharacteristically, the surgeon needs to express vulnerability. For in this expression of doubt lies great strength. It is this realization of weakness and internal contradiction that allows the surgeon to clear the air and once again go forth and do significant things.

But what of balance? The need for equilibrium. The quiet determination exhibited in the raging storm of acute illness or injury. This balance or equanimity is achieved with

culture. The healing power of the Charles Mingus composition – Goodbye Pork Pie Hat, the plaintive sounds of Miles Davis' Blue in Green

or the soaring affirmation of John Coltrane's – A Love Supreme can restore that sense of balance. All of this reaffirming the cycles of life, the tragedies and triumph. Consequences that can be dealt with through music, dance, poetry, fiction, faith and hope. This balance through culture provides an orientation. A way for us to see how we are connected to the whole; the continuous legacy of human experience on this planet.

Contemplating the Visible

A surgeon stakes decision-making and credibility on the correct interpretation of the facts at hand. Those "facts" may be just a portion of the complete story. There is an essential history for an illness that is vital. At times we can not fully digest what we have seen, heard and felt until the event is over (2). A period of debriefing allows us to analyze our actions. Was the tumor really contiguous with the duodenum or was there an associated inflammatory response that simulated local invasion? Was the agitation really a sign of shock or was it drug induced? We may not be able to answer the question what does all of this mean? Even so, we must always remember to ask.

The Search for Unity

The imperative of surgery and medicine is the objective of restoration. It is the *raison d'être* for healing. To preserve and return to the whole whether individual or collective. This restorative duty determines the surgeon's actions and thoughts. It has spawned intense research and creative genius. Cardiopulmonary bypass, microsurgical techniques for limb re-implantation, organ transplantation and artificial joints are just a few examples of achievements in the research arena that have restored surgical patients to health. Surgeons involved and responsible for these advances have exhibited a selflessness that reflects the ongoing commitment to unity. Living and sacrificing for others is the pinnacle of this search. It speaks to an essential question that every surgeon must answer: "what is in my heart?" This query must be answered on a daily basis, on rounds, in the operating room or emergency room, by choices, opportunities, success and failure. It is a question that demands cautious reflection that allows one to identify real motivations. Surgeons must prepare. This preparation must include a process of bonding with the patient and family. This union may take place over several meetings. It is revealing to see how the surgeon, patient and family dance. How does the surgeon answer questions? Are the explanations accessible? Is the language used straightforward? Has the family sized the surgeon up? Assessing confidence, demeanor, knowledge, teaching ability

and experience during the course of the interaction. Has there been an effort to enlist the aid of the family to develop a team that will address all aspects of care?

This is part of the ritual of preparation. Another rite of passage inherent in safe surgery. To be sure, there is internal preparation that must be done as well. The surgeon must find a place of meditation where the picture of things to come can be seen. Some like to run, swim or perform other forms of exercise like yoga or even martial arts. Meditative practice may help the surgeon to quiet the mind to better grasp what is in front of it. Most often during a procedure it will be prudent to take what the tissues have to offer. At other times, the surgeon must blaze a trail.

Disturbing the Delicate Balance

There are patients who can reach a steady state with their illness. They are not cured. Rather they endure tolerably the destructive toll the illness takes. At times we observe that a person lives symbiotically with their tumor or manages their chronic obstructive pulmonary disease with portable oxygen well. Occasionally, there is an understanding that is reached that allows the patient to achieve a measure of freedom from the "condition". There is cause for celebration when this occurs. Inevitably during the course of a long career, a surgeon may be asked to intervene because symptoms have worsened and hope seems to be fading fast. One may be asked to disturb the delicate balance. In going down this path, the surgeon must understand the patient as a person. Their background, hopes and longings. To operate just because something can be done technically is often the wrong choice for a person at the end of their life. The surgeon must weigh whether palliation might be done with comfort measures that don't destroy the individuals' dignity and integrity. Should an elderly comatose nursing home stroke victim with a large sacral decubitus be intubated because of sepsis? The patient's wishes are paramount and the family will help guide the clinician when the patient is unable to speak for him or

herself. In the example noted, common sense should prevail and intrusive measures would seem to be misguided. In contrast, can you ethically withhold operative intervention in an alert and active elderly woman with a history of congestive heart failure who has an incarcerated inguinal hernia? Absolutely not and often it will be surprising how quickly some elderly patients bounce back from a well performed operation.

I was asked to see a 90- year old man with heart disease because of a suspected diverticular perforation. He had minimal abdominal tenderness with mild leukocytosis. There was some fluid around the suspected area of perforation and a few small bubbles of air. We decided to treat him with antibiotics only and he recovered.

This outcome was in stark contrast to another patient in her 60's with COPD, congestive heart failure and on-going infection who also had a colon perforation. I operated on this patient and regretted that intervention. The involved portion

of the colon was resected and a colostomy was performed. She did well for a day and then promptly went into shock and died.

I cared for another patient who was in her early 70's. She was being treated for advanced lung cancer with chemotherapy. She also had a history of thyroid cancer and laryngeal cancer. She presented with large bowel obstruction with a perforation from a colon cancer. We performed a subtotal colectomy with ileostomy as the perforation was at the cecum and the primary was in the sigmoid colon. She recovered and then continued with her chemotherapy for the large lung primary. She complained bitterly about the ileostomy and wanted it reversed. After much soul searching the ileostomy was taken down and she recovered uneventfully. In each of these instances, the delicate balance was at risk. How we navigate this issue may determine the outcome. We must choose wisely. At times we must demur, to exercise surgical restraint. This may be the safest outcome for the patient.

The Power of Listening

I cared for an elderly patient over many years. I performed a parathyroidectomy because of primary hyperparathyroidism and the patient was cured. Afterwards, she developed what was thought to be chronic pancreatitis and biliary colic with repeated trips to the emergency room. She would present to my office with complaints of abdominal pain and her symptoms seemed to improve just with talking. It turns out that she was estranged from her son for some reason and just felt lonely. Loneliness causing abdominal pain. This one is not in the textbooks but somatic complaints can occur with psychological stress. It can be quite dramatic as we have seen catatonic states after severe trauma like a motor vehicle collision. Some patients present with paralysis that miraculously resolves after a brief period of observation.

One must listen without preconceived notions and we must never assume that we know what the real problem is. We must avoid stereotypes and pat answers; placing people and events in boxes that suit our needs for space and time but that do a profound disservice to the patient that seeks and needs our help. We must take a breath and realize that it is our family members who seek our help. They may wear green or blue or speak Spanish instead of Xhosa, Kikuyu, Italian or French. They may appear unkept and ruffled. They may act rudely or abruptly. They may be educated or uneducated. They are us.

We must take time to listen to accumulated hurts, fractured friendships, lost marriages and continued misunderstandings. It is engaged, concerned and thoughtful listening that is needed (3). This is where real healing begins.

The problem of Error

Fallibility is a hallmark of human endeavors. Humans test themselves against real and imagined obstacles. We push the limits of what is known about endurance, discipline,

perseverance and preparation. We fall short at times in the most mundane of tasks and succeed at times when success is unthinkable. Some of these discordant and paradoxical outcomes relate to the emotional context of human endeavors. Each action or interaction is colored by an emotional milieu. A collage of feelings driven by hope and aspiration or fear and loathing. The surgeon may experience occasional periods of egomania. Feelings of omnipotence that can lead to self-delusion. This type of thinking, the anastomosis will hold because I say so – even though the two sutured ends are clearly ischemic. The oozing from the splenic bed will stop because it is just oozing even though in reality several untied short gastric vessels are the source of the blood loss. The above the knee amputation stump will heal even though there is ischemic muscle at the closure site. These are just a few examples of hubris and self-delusion that can lead to disaster for the patient and surgeon alike. To avoid this particular land mine, one must adhere to a brutal brand of self-analysis and honesty. It is through the admission and avoidance of self-delusion that one can emerge as a truly safe surgeon. The morbidity and mortality conference has been the classical venue where surgical complications are discussed. This cloistered confessional has a cleansing effect. It allows the surgeon to accept blame (*mea culpa*) with all the caveats that go with this. It comes with the realization that error is usually multi-factorial. There have been many omissions and commissions along the pathway of clinical

disaster. It is this array of events that challenges the notion that these are random events. They are predictable events that often have institutional failures along with individual errors at their core. How does a surgeon cope with loss? When everything goes wrong and the patient expires. All physicians experience emotional upheaval when patients die or suffer because of our actions (4). Does the surgeon hide under an impenetrable barrier of excuses and fabrications? Does the surgeon drown his or her sorrows in mind altering drugs or in an exhaustive pace of new and difficult cases?

The wise surgeon takes time to mourn the loss and celebrate the life. Only in this way can the surgeon marshal the internal will to press on, accept another patient and rise to meet the next opportunity to heal.

In Search of Clinical Intuition

I was fortunate to care for another patient transferred from an outlying hospital to a local trauma center with a dislocated hip, an acetabular fracture and spleen injury detected on an initial CT scan. The patient had his hip relocated on admission to the trauma center but some six hours had transpired prior to his transfer. A repeat CT scan revealed bleeding from the spleen and angiographic embolization was done. He subsequently developed an ileus and was scheduled for internal fixation of the acetabular fracture. This orthopedic procedure was cancelled and the patient was taken to the operating room for an abdominal exploration because “he just didn’t look right”. He was found to have a gangrenous colon segment. A

colectomy with end- colostomy was done. Surgeons at times must “trust their instincts”. The purists will say that this is not intuition at all. It is good medical practice to identify a source of sepsis early that may be making the patient sick. This critique can not be dismissed but both things are often at play. Physicians of all disciplines use pattern analysis to make diagnoses and more often than

not these patterns of illness are spot on (5). However, there are times when the illness does not run a typical course and more than pattern recognition is needed. A hunch may be just the thing that prompts a look in another direction that bears fruit for the patient. It is the search for a urinary tract infection in the elderly patient that is just a little confused. It is the 2:00 a.m. call to the intensive care unit to follow-up on the oxygen saturation of a patient not yet in ARDS. It is the work-up for seizure in a patient who has periods where they are just not themselves. The inner voice of the physician and surgeon should never be ignored.

Conclusion

Surgeons must remain sensitive to the hardships that the patient and family endure. They must recognize the spiritual dimension of healing. The surgeon needs a language that reflects an even temper and a consoling heart. Although rushed and tugged in multiple directions the surgeon must carve out time for patients and their families. Time to commiserate, to contemplate and even celebrate small victories. Surgery then is a metaphor for life. It is intrusive, aggressive, at times unrelenting, injurious and frightening. It has a great capacity for healing, and by its’ nature is a testimonial to the capacity to think, devise and create. It is a discipline of great decisiveness. It is not mystical or occult. It is not rare or esoteric making the language of discovery obscure. It is a journey predicated on the love of one for another. This is the art of surgery.

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