Intraoperative Decision Making: The Decision to Perform Additional, Unplanned Procedures on Anesthetized Patients

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The informed consent documents that patients sign before having surgery usually give surgeons permission to change the surgical plan in response to surgical complications, unexpected events, or unusual anatomy. However, surgeons must occasionally make critical intraoperative decisions that might not have been discussed with the patient before the induction of anesthesia. In a previous article,[1] we addressed the ethics of calling surgical colleagues to the operating room for an intraoperative consultation to help with decision making or to provide technical skills needed to respond to unanticipated surgical challenges. The questions that we wish to address in this article are whether there are or should be restrictions on the surgeon's ability to act on such unanticipated challenges by performing additional procedures, and what process should surgeons follow to reach ethically acceptable decisions about performing additional procedures.

Surgeons' intraoperative decisions on behalf of patients are special because they are often urgent—occurring during surgical procedures; are made on behalf of a patient who is only temporarily unable to make decisions and will ostensibly return to a competent state after emerging from anesthesia; and involve weighing the risks and benefits of stopping the surgery to allow the patient to wake up to participate in the decision vs the additional risk posed by needing a second operation and anesthesia. We believe that this confluence of factors makes decision making for anesthetized patients during surgery particularly challenging and worthy of examination.

Disclosure Information: Nothing to disclose.

Received December 31, 2015; Revised February 9, 2016; Accepted February 9, 2016.

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Consider the following scenario: A surgeon is performing a routine cholecystectomy on a middle-aged woman for cholelithiasis, when repositioning his camera and retractors, he discovers a sizable, exophytic uterine mass that was unknown before the procedure. The mass is adherent to bowel, but the exposure is good and biopsy would be technically straightforward. He calls on a colleague in gynecologic oncology for guidance, and the colleague is convinced, based on appearance, that this is a uterine cancer that would be amenable to resection. They discuss options for management, including completing the cholecystectomy only and waking the patient up; adding a biopsy of the mass to the cholecystectomy; and (should the intraoperative biopsy prove positive) performing an immediate, definitive resection of the mass, including uterus, bowel segment, and lymph node dissection.

Like all medical decisions, intraoperative decisions require balancing the principles of beneficence (working in the best interests of the patient), nonmaleficence (doing no harm), and autonomy (respecting patient preferences). The autonomy principle raises special problems because under anesthesia, the patient cannot participate in decisions. The patient's autonomy could be respected in two ways, either by deferring decisions until the patient can be woken up to participate in the decision or by assuming that the patient has given license to the surgeon to perform additional and necessary procedures. The latter assumption might be based on a patient's previously stated choices, surrogate (usually family) input, knowledge of the patient's values developed through a pre-existing surgeon-patient relationship, or by applying a "reasonable patient" standard.

UNDER WHAT CIRCUMSTANCES MUST WE MAKE INTRAOPERATIVE DECISIONS?

Ideally, the surgical decisions can be deferred until the patient is able to participate in the decision-making process. There are at least 3 key circumstances, however, where this is not possible: if the surgical situation is an emergency, such as uncontrolled bleeding; if aborting the procedure before taking additional action would cause

http://dx.doi.org/10.1016/j.jamcollsurg.2016.02.011
ISSN 1072-7515/16

harm to the patient, such as when surgical exposure is tenuous and would be greatly complicated during reoperation; or if the patient has comorbidities, such as severe COPD, that make additional anesthetic for a second procedure high risk.

In cases of emergency, the standard of waived consent[2] permits proceeding and the surgeon must determine how to act in the best interests of the patient. In circumstances where there is potential for surgical or anesthetic harm by postponing the procedure, this harm must be balanced against the right of a patient to make decisions about their own care.

Beyond the 3 situations mentioned, where surgeons should act without awakening the patient, there are other circumstances where it is medically possible and appropriate to defer additional procedures, but deferring could result in patient dissatisfaction and inconvenience. When the patient awakes and learns they will need a second surgical procedure, they might object to the need for an additional anesthetic, second recovery period, and additional time away from their work and home. These latter circumstances might be the most challenging from an ethical decision-making perspective, and there are no clear guidelines to cover such circumstances.

WHO SHOULD MAKE INTRAOPERATIVE DECISIONS?

The patient

The best way to know patient preferences would be if the patient had previously stated choices that applied to the current surgical situation. If a patient has documented earlier wishes, such as in an advance "surgical" directive, such a document might inform decision making. For example, if a patient with arterial insufficiency and necrosis of 3 toes agrees to have the toes amputated, but also gives permission to have the entire foot amputated if deemed necessary, this intraoperative decision would not have to be discussed further. The surgeon should follow such directives to the extent that they cover the decision at hand.

In many ways, the purpose of the informed consent process is to explain potential issues that can arise during surgery and to obtain patient input as to how to proceed given various scenarios. This is not an advance directive per se, but rather an opportunity for the surgeon to gain enough information to act on the patient's behalf should there be a need for an intraoperative decision. This can even be accomplished in the setting of preoperative uncertainty; surgeons will often get consent from patients undergoing exploratory surgery (eg exploratory laparotomy) for several "possible" procedures that might or might not be performed, depending on the findings.

Unfortunately, unexpected events, rare complications, or unusual findings, by their very nature, will often not have been discussed with the patient before surgery, and would also likely not be codified in an advance directive. In these cases, surgeons often turn to other sources to inform the decision and to obtain surrogate consent.

Surrogates

The seemingly natural choice of a surrogate is usually the family member that accompanied the patient on the day of surgery and who is in the waiting area. These family members are easily reached for discussion and widely assumed to be familiar with the patient. It is not uncommon for a surgeon to pause briefly to come out and discuss an unforeseen situation with the family before proceeding. Such discussions have a number of potential benefits, and might even be expected by the family.[3] Nevertheless, such conversations must be undertaken with caution because the person accompanying the patient to the hospital on the day of surgery might not be the appropriate or optimal decision maker.

In a survey of 100 general surgery patients asked about their preferences for decision making in the setting of unexpected intraoperative findings, 9 (14%) of the 64 patients who reported having a designated decision maker indicated that this decision maker was neither the person in the waiting room nor the person listed in their chart.[4] This calls into question the practice of defaulting to an accompanying party or even relying on the written chart for selecting the appropriate surrogate; ideally, the patient is asked to confirm the identity of their preferred surrogate just before the procedure. When a decision maker has not been designated by the patient, there is a hierarchy of surrogate decision makers, which varies based on state law.[5]

Occasionally, the family or even designated surrogate might not be the optimal decision maker. In some cases, the intraoperative findings might be considered so personal that it would be inappropriate to share with the family without the patient's explicit consent (eg sequela of sexually transmitted diseases or drug abuse, or matters involving reproductive capacity). In addition, the sorts of decisions that arise from unanticipated moments in surgery are often not minor, and can carry life-long disability risk for the patient. Surrogates might be reluctant to agree to things that can have a profound impact on the patient's long-term quality of life.

Some surrogates might be certain of the choices a loved one would make, and in these situations they presumably should have final authority in making a substitute