

**CASE AND COMMENTARY: PEER-REVIEWED ARTICLE**

**How to Support Patients Near the End of Life Whose Pain Is Best Treated With Surgery?**

Elle L. Kalbfell, MD and Margaret L. Schwarze, MD, MPP

**Abstract**

For seriously ill patients whose pain is best treated with surgery, it is important to discuss and explore treatment goals preoperatively. Knowing which health states a patient would tolerate helps the surgeon identify interventions that are overly burdensome, overreach survival goals, or undermine the patient's quality of life. Surgical success should be defined by how well an intervention aligns with patients' goals. Early integration of specialty palliative care can help identify surgical patients with unmet needs, optimize symptom management, clarify preferences, and improve end-of-life care.

**Case**

Mr F is 80 years old and has peripheral vascular disease with arterial insufficiency in his left leg. He has excruciating pain in his foot that wakes him up at night and is relieved by hanging his foot over the side of the bed. He also has a small ulcer on his left big toe. Some nights, he sleeps in his recliner with his foot down to mitigate the pain (gravity increases blood flow). He also has emphysema and diabetes and has suffered a major heart attack and several small strokes. He and his primary care physician, Dr K, agree that because of his multiple medical problems, he is "wearing out." Mr F thinks of himself as a "tough cookie," but he understands his remaining life is limited and agrees to an out of hospital do-not-resuscitate (DNR) order.

However, the pain in Mr F's foot is making his life unbearable. Dr K refers him to a vascular surgeon, Dr T, to discuss treatment to improve blood flow and relieve his pain. After noting that endovascular intervention is not an option for Mr F because of his severe common femoral disease, Dr T notes, "We can offer you major surgery to address your symptoms, but it won't prolong your life. And if you have complications, it could shorten your life." "I'll take the risk of surgery," Mr F responds. "Life with this much pain isn't worth it. Maybe I'll die during the surgery, and that's OK."

Mr F undergoes a left common femoral endarterectomy and lower extremity bypass graft. The long operation and significant blood loss generate major complications, including postoperative myocardial infarction and aspiration pneumonia requiring intubation. When Mr F is weaned from the ventilator after an extensive intensive care

unit (ICU) stay, he has lost weight, is severely deconditioned, and has a decubitus pressure ulcer. Throughout Mr F's decline, Dr T says, "I'll get you through this." Dr T feels guilty and sad about Mr F's decline and difficult postoperative course. Dr T visits Mr F again after another bout of aspiration pneumonia requiring Mr F's urgent transfer to the ICU for respiratory distress. "I'm so sorry to see you so sick, Mr F," says Dr T. "If I'd known it would be like this," says Mr F, "I never would have let you operate on me. You shouldn't have offered me surgery if there was even a chance for things to turn out this way. You're the expert, but I didn't know any better." Subsequently, Mr F declines intubation, transitions to comfort measures, and dies several hours later.

At the surgical morbidity and mortality (M and M) conference, Dr T presents Mr F's case. "I feel terrible about how things turned out," says Dr T, speaking in front of a room of surgeons. "From an operative standpoint, I'm not sure what I could have done better. Surgery was risky, but he was adamant he wanted to try. Complications of surgery unquestionably shortened and worsened his remaining lifetime. But how could I not have offered him surgery when I thought it could help him? What would you have done?" M and M conference attendees consider how to respond.

### Commentary

When considering any surgical intervention, it is important to understand the patient's treatment goals. How can surgery help the patient? Will it prolong life, alleviate pain, or prevent disability? Mr F's sole reason for pursuing surgery was pain relief; for patients like him, for whom surgery has exclusively palliative goals, treatment decisions require clear delineation of the trade-offs between surgery and what the patient is willing to endure to feel better. For patients like Mr F, there are 3 *surgical* options: (1) femoral endarterectomy, which will control rest pain but is unlikely to remedy tissue loss; (2) femoral endarterectomy and bypass, which will decrease both pain and tissue loss; and (3) a below-knee amputation. To treat the entirety of Mr F's problems, a common femoral endarterectomy and bypass would have been ideal, as it attends to pain and tissue loss. However, the perceived best or ideal procedure may not have been the right procedure for the patient.

Although the endarterectomy and bypass mitigated Mr F's pain, postoperative complications and prolonged hospitalization severely compromised his quality of life and remaining lifespan. The burdens of the perceived best operation overshadowed his goal of pain control when a less extensive operation might have attended to his pain but allowed him to return home or at least avoid a **long postoperative hospitalization**. Interventions like the best case/worst case communication tool can be used to generate dialogue about the patient's goals and preferences for treatment limitations and to introduce alternative strategies.<sup>1</sup> By using scenario planning to tell a plausible story about the experience of surgery and recovery, this framework allows patients to anticipate and prepare for unwanted events and to articulate their fears about interventions and outcomes that are unacceptable to them.<sup>2</sup>

### Identifying Preferences

In the presence of severe pain, patients are often willing to undertake major risks to feel better.<sup>3</sup> Surgery can improve symptoms and prolong life, but it can also lead to significant cognitive and functional changes.<sup>4,5</sup> Discussing poor outcomes and postoperative rescue treatments (eg, a risk of death or prolonged intubation) might prompt patients to talk about the treatments or health states they are willing or not willing to accept. When a patient has an existing DNR, reconsideration of the use of

cardiopulmonary resuscitation (CPR) during surgery, not automatic suspension, is required.<sup>6,7</sup> Consistent with this long-standing policy of the American College of Surgeons and the American Society of Anesthesiologists, this case should have presented the opportunity for Dr T to discuss more than just CPR with Mr F.

For patients with life-limiting illness, surgeons need to know what to do if an adverse event occurs. Although many surgeons believe that they routinely **discuss advance directives** and postoperative life-sustaining treatments during informed consent,<sup>8</sup> in reality, they rarely do.<sup>9,10</sup> Mistakenly, surgeons infer that a patient who commits to an operation has also committed to the necessary postoperative life-supporting treatments.<sup>11,12,13</sup> Dr T knew Mr F's operation was high risk and might shorten his remaining life, yet he failed to discuss Mr F's preferences should postoperative life-supporting treatments be needed. How would Mr F feel about being in the ICU on a ventilator? Would he accept a feeding tube if he were unable to eat or drink? Knowing what the patient would want if he could no longer speak for himself can help surgeons direct care when the goal of surgery is no longer achievable or the burdens of treatment are no longer acceptable to the patient. Discussion about treatment limitations should include patients' reasoning and thoughts about the use of postoperative life-sustaining treatments, as such treatments are often temporary and the range of outcomes is not easily categorized as "alive" or "dead," as Mr F had assumed.

### **Defining Success**

Surgeons are focused on avoiding postoperative mortality, which may directly conflict with the provisions of palliative surgery. Appropriately, they feel strong responsibility for the lives of their patients and are required to report 30-day mortality publicly for certain procedures.<sup>14</sup> This requirement can lead surgeons to refuse surgery for high-risk patients (even for palliative needs) and be reluctant to withdraw postoperative life-sustaining treatments.<sup>14</sup> Because of the surgeon's personal investment in patient care and recovery, survival is regularly viewed as a marker of surgical success, whereas postoperative death is viewed as a failure. However, the surgeon's actions should be guided by the patient's autonomous wishes, even when these conflict with surgeons' emotional need to ensure survival<sup>13</sup> or **personal concerns** about how they will be viewed by others.<sup>15</sup> As such, conversations at M and M conferences should shift from consideration of physician-defined adverse events (ie, complications and death) to consideration of outcomes and morbidity from the patient's perspective. Dr T's colleagues should note that the morbidities in this case stemmed from providing treatment inconsistent with Mr F's preferences during a 10-day ICU course. They might also point out that the limb-salvaging procedure performed overreached Mr F's goals of pain reduction and led to unwanted outcomes. Using outcomes measures that align with patient goals rather than traditional metrics of success would improve palliative surgical opportunities for patients and recenter surgical care around the outcomes that matter to patients.

### **Integrating Palliative Care**

Specialists in palliative care are skilled in supporting patients with serious illness and navigating complex medical decisions and treatments, such as surgery. Despite the documented benefits and increased awareness of concurrent palliative care for surgical patients, integration of palliative care into surgical practice remains limited.<sup>16,17</sup> Barriers include misconceptions about the role of palliative care (eg, it hastens dying or is only focused on comfort) and lack of access to specialty palliative care. The culture of surgery prompts some surgeons to focus exclusively on rescue; these surgeons might

view palliative care as conflicting with the goals of surgery and might consider consultation to be giving up on or abandoning a patient. Overcoming these barriers and identifying surgical patients who would benefit from early **integration of palliative care** is important. Guidelines recommend screening surgical patients for frailty and serious chronic illnesses<sup>18,19</sup> and seriously ill patients with burdensome symptoms and complex or unmet needs.<sup>20</sup> Palliative care concurrent with surgical care can increase patients' understanding of their disease, improve symptom management, alleviate emotional and spiritual suffering, and promote goal-concordant care.

### Conclusion

Supporting patients near the end of life whose pain is best treated with surgery is important for improving quality of life, even when the patient's remaining lifetime is short. However, surgical benefits should be balanced against the burdens of surgical treatment. Preoperative discussion and documentation of patients' preferences for postoperative life-sustaining treatments in relation to their goals helps avoid unwanted interventions in the setting of bad complications or outcomes. Knowing patient preferences for life-sustaining treatments also helps mitigate the emotional cost and professional demands of poor surgical outcomes that might push surgeons to continue aggressive care that extends beyond patient wishes. Surgical success should be synonymous not with patient survival but with outcomes that respect patient autonomy and align with patients' health goals. Moreover, early integration of palliative care can help align patient goals with treatments when choosing among a range of invasive therapies and can improve complex decision making.

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**Elle L. Kalbfell, MD** is a resident physician in general surgery at the University of Wisconsin-Madison. She is also a graduate of the MacLean Clinical Ethics Fellowship. Her interests include surgical ethics and palliative care.

**Margaret L. Schwarze, MD, MPP** is the Morgridge Endowed Professor in Vascular Surgery at the University of Wisconsin-Madison. She is a health service researcher and medical ethicist with expertise in surgical decision making, informed consent, advance directives, and end-of-life care. Her research focuses on improving communication between older patients and clinicians so that patients can avoid unwanted treatments and make decisions that align with their values, preferences, and goals.

**Editor's Note**

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