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Perioperative ERAS Protocols Reduce Pancreatic Patients' Length of Stay

San Diego—Implementation of enhanced recovery after surgery (ERAS) protocols for pancreatic surgery decreased hospital length of stay (LOS), a study concluded, which ultimately improves quality of care, accelerates recovery, improves outcomes and optimizes utilization of health care resources.


(http://www.anesthesiologynews.com/aimages/2016/AN0116_012a_18312_300.jpg)

"Enhanced recovery clinical pathways are really a paradigm shift that serve to evaluate our traditional practices and make evidence-based recommendations for improvement," said Lavinia M. Kolarczyk, MD, assistant professor of anesthesiology at The University of North Carolina at Chapel Hill School of Medicine. "Nevertheless, the pathways themselves are not novel. The innovative aspect of enhanced recovery is learning how to work together in multidisciplinary teams to implement these best-practice guidelines.

"Ultimately, ERAS serves as the vehicle to promote quality improvement research; break down practice silos between anesthesiologists, surgeons and perioperative nurses; and really challenge why we do what we do every day."

Goals of ERAS

Given that previous studies have shown a beneficial effect of ERAS pathways on hospital LOS after pancreatic surgery, the investigators decided to follow suit using a multidisciplinary approach with stakeholders from the Departments of Anesthesiology, Surgical Oncology and Perioperative Nursing. "Our institution is a very busy pancreatic center, but prior to ERAS, the quality of care was inconsistent," Dr. Kolarczyk said. "This was unacceptable for a patient population at highest risk for perioperative morbidity and mortality."

All patients having major laparoscopic or open pancreatic surgery were included in the ERAS clinical pathway; patients who had major pancreatic surgery from the previous year were used as historical controls. Pathway components were divided into preoperative, intraoperative and postoperative goals (Sidebar).

As Dr. Kolarczyk noted at the 2015 annual meeting of the American Society of Anesthesiologists (abstract BOC05), 31 patients undergoing pancreatic surgery completed the ERAS pathway (18 Whipple procedures, 13 distal pancreatectomies). It was found that the mean hospital LOS for Whipple patients in the control group was 11.1 days, compared with 8.5 days for those who went through the ERAS pathway, a decrease of 2.6 days (P=0.0065). Distal pancreatectomy patients, on the other hand, stayed an average of 9.1 days if they did not go through the pathway, and 6.3 days if they did (P=0.0014).

"Equally important was the standard deviation we observed with respect to length of stay," she added. "Before we started enhanced recovery, there was considerable variability in the standard deviation. Once we started ERAS, though, the standard deviation came right down. So we really took control of the process for pancreatic surgery."

Analysis aside, Dr. Kolarczyk said that what makes the biggest difference for her is seeing how her patients respond to the ERAS pathway. "We can talk about length of stay and how much it impacts the financial aspect of the hospital, but I'll tell you from the bottom of my heart that our patients look sincerely better."

ERAS Pathway Goals

Preoperative Goals

- Avoidance of bowel prep
- Patient education
- Consumption of a carbohydrate drink
- Blood pressure assessment

Intraoperative Goals

- Standardized anesthetic management
- Goal-directed fluid therapy
- Avoidance of systemic opiates
- Thoracic epidural analgesia

Postoperative Goals

- Early mobilization
- Early oral intake
- Early removal of Foley catheter
- Early removal of nasogastric tube

Mervyn Maze, MB ChB, professor and former chair of anesthesia and perioperative care at the University of California, San Francisco, was surprised that the researchers chose to focus their efforts primarily on preoperative and intraoperative management. "The [Center for Medicare & Medicaid Services'] bundle payment for care improvement is going to involve postoperative care for up to 90 days," said Dr. Maze. "And the payment to the hospital, which will then be distributed to individual practitioners—if you don't do anything postoperatively—you may lose everything that you gained preoperatively and intraoperatively."

"We were involved in the postoperative care of these patients," Dr. Kolarczyk responded. "However, our surgeon was already doing a lot of the things we had suggested. That said, the only things we changed in postoperative care was having a more defined postoperative pain management strategy and closer involvement with our acute pain service teams to regulate how much opioid patients were getting after surgery.

"Down the road," she added, "we'd like to better understand the impact of enhanced recovery on postoperative cognitive dysfunction. So, I see us being more involved at that important one-month visit."

—Michael Vlessides

Dr. Kolarczyk reported no relevant financial disclosures.