

Tackling the Opioid Epidemic: Using the Enhanced Recovery After Surgery Principles to Manage Gynecological Post-Op Pain

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Since the 1990s, the opioid epidemic has had detrimental consequences including unnecessary prescriptions, misuse leading to addiction, and death from withdrawal symptoms. In the last few years, there has been an increase in awareness of this crisis and a call for solutions ¹. On October 2, 2018 California's Controlled Substance Utilization Review and Evaluation, better known as CURES 2.0 was implemented. Essentially, before prescribing federally controlled substances such as narcotics, health professionals must first look up a patient's prescription history in the CURES data base. This program was established with the intention of decreasing abuse and diversion of addictive medications without effecting patient care and management ². While this database is a step in the right direction, I believe initiation of preventive measures can have more of a lasting effect and eliminate the need for initial opioid prescription, the preceding factor to the list of negative outcomes mentioned above.

A demonstrated but underused preventative method called "Enhanced Recovery After Surgery," or ERAS, is a set of principles initiated by Dr. Henrik Kehlet in the 1990s that focuses on perioperative management to reduce pain, complications, and hospital stays. These principles should theoretically be implemented during the pre-operative, peri-operative, and post-operative period for maximum results ³. The American College of Obstetrics and Gynecology (ACOG) published an educational opinion piece in August 2018 that discussed this concept further. It mentioned that ERAS components include, but are not limited to nutritional counseling, multiple methods for pain control, and holistic discharge plans. For example, ACOG recommends dedicated perioperative counseling which entails tobacco and/or alcohol cessation at least 4 weeks before surgery to ensure adequate healing. Additionally, the committee suggests fasting 2 hours before the procedure and eliminating oral mechanical bowel prep to encourage a more rapid return of bowel function after the surgery. Perioperative recommendations include oral administration of Celecoxib, Acetaminophen, and Gabapentin prior to operative room entry to facilitate a step-wise pain control plan. Lastly, prior to discharge providers are encouraged to devise a defined patient discharge pathway that include full mobilization, ability to tolerate oral feedings, and adequate pain control with Non-steroidal Anti-inflammatory drugs ⁴. After reading ACOG's current recommendations regarding the use of ERAS to enhance patient-centered care during surgery, I became interested in how these protocols have contributed to reduction of opioid use specifically for gynecological post-op pain.

One team in 2017 discussed the management of postoperative pain after minimally-invasive gynecologic surgery in the era of the opioid epidemic. This research concluded that the use of intraoperative nonopioid alternatives, noninvasive surgical techniques, and recovery protocols that paralleled ERAS principles not only contributed to a decrease in postoperative pain without the use of narcotic medications, but also contributed to shorter recovery time after minimally-invasive gynecologic surgery ⁵. Another team published work in 2018 regarding enhanced recovery after surgery in relation to conventional postoperative care in patients undergoing abdominal hysterectomies. Among a group of 62 patients who underwent abdominal hysterectomies, 30 were put into the ERAS group and 32 into a group who received conventional post-operative care. Results indicated that those in the ERAS group displayed significantly shorter time to first defecation and experienced less "severe pain"-pain rated greater than 7/10 prior to discharge- compared to the control participants ⁶. These papers are a few among the many published articles that demonstrate how ERAS components lead to faster recovery, shorter hospital stays, and decreased use of opioids after surgical procedures.

Although these protocols have been in practice for over a decade with proven success in various research projects, an important question is to be answered is: how are hospitals and institutions implementing ERAS methods in their current practice today?

Kaiser Permanente Northern California integrate health care delivery system evaluated the outcomes of ERAS through a multifaceted ERAS program focused on perioperative pain management, mobility, nutrition, and patient education. The program was implemented in 20 Kaiser Permanente medical centers, involving 9000 surgical patients undergoing elective colorectal resection or emergency hip fracture repair. Care processes included but were not limited to patient education, elimination of prolonged fasting, multimodal analgesia, avoidance of drains/tubes, deep vein thrombosis removal, and quick restoration of gut function. The results ultimately demonstrated a one-third relative reduction in postoperative complication rates and a 21% reduction in opioid prescribing rates. Although limited to two surgical procedures, the study which implemented ERAS protocol in clinical practice highlighted how ERAS programs can reduce the anxiety surrounding surgery in addition to reducing complications, and opioid prescription rates. Therefore, these results influenced the implementation of such practices among all of the Kaiser Permanente Northern California health care institutions¹⁷. Other health care centers have followed a similar path. The Johns Hopkins Armstrong Institute for Patient Safety and Quality in collaboration with the American College of Surgeons has been utilizing a \$4 million contract to further improve post-surgical outcomes among patients in the United States. ERAS initiatives in all Johns Hopkins hospitals, similar to those practiced in Kaiser Permanente, have shown to reduce hospital length stay by 1.5 days for patients having colorectal surgery. Additionally, there was significant surgical cost reduction for the hospital and a 50% decrease in surgical-site infections. Furthermore, this institution has taken further steps to improve patient care not just among their community but others as well. Health care providers from the Johns Hopkins health centers have made efforts to provide faculty presentations, virtual learning, and coaching for health centers interested in learning more about these principles and their possible beneficial outcomes¹⁸.

Although ERAS protocols have been proven to be beneficial in clinical research and practice, there is further investigations to be done, specifically in the field of Obstetrics and Gynecology. I believe that it would be helpful to evaluate, compare, and analyze ERAS principles in this field among various health centers around the nation to better establish a comprehensive approach towards eradicating the opioid crisis. Nevertheless, for ERAS to be appropriately used in any field, the surgical team, hospital administration, and patients need to work together to promote its sustainability. ERAS principles should first and foremost be approved by hospital administrations. Second, patients need to be informed and comply with the recommended interventions. Finally, physicians and support staff must implement the components on a consistent basis. In summary, ERAS principles can serve as an innovative approach towards eliminating the current opioid crisis and contributing to patient-centered care practices.

Note

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