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ASC REVIEW

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Are Hidden Costs Hurting You? A Regional Anesthesia Approach to Reduce Complications and Cost at ASCs

ASCs have long relied on general anesthesia with “breathing tube” devices, followed by narcotic-based pain management in surgery patients. The use of opioids, however, has led many facilities to accept a high risk of PONV, excessive pain (if under-treated with opioids) and other adverse events. These side effects are highly undesirable, but largely considered “the norm,” or “the way we have always done it.” This kind of health care culture can translate to significant losses of both time and money for the ASC.

“Switching simple components of the anesthetic plan can reduce complications and increase efficiency in your ASC while reducing costs,” according to John LaFratta, corporate training manager in pain management for B. Braun Medical. In this article, he discusses both the financial and quality benefits ASCs can reap from a regional anesthesia (RA) approach.

Financial impact of excessive pain and PONV

Post-op pain and PONV are commonly experienced outcomes of invasive surgical procedures, and are the two most common reasons for a prolonged PACU stay (e.g., greater than 30 minutes). Mr. LaFratta notes that these complications are costly for ASCs.

To demonstrate the impact, B. Braun developed a program to help ASCs project the costs of these and other post-operative complications. Centers input their experience with episodes of PONV and excessive pain to quantify the impact it can have to your bottom line. Consider, for example, what effect adverse events can make on an anterior cruciate ligament reconstruction (ACLR), one of the more common invasive orthopedic procedures performed in outpatient surgery. The results show the cost of one episode of PONV following ACLR can erode 25 percent of the revenue from that case. Ten epi-

sodes of PONV each month could cost up to \$25,000 per year for treatment that tie up labor and patient flow.

“Episodes of PONV and follow-up pain management are the two most common reasons patients are held in the PACU. Shivering, itching, and lightheadedness are also important to consider, and any of these leading to patients in distress will require increased nursing interventions (e.g. dosing intravenous medications) that could lead to bottlenecks at the facility, and possibly increased over-utilized time (and/or forced overtime). Margins are tight, so all such variables need to be contained. PONV and pain are two variables that can be better managed using RA with local anesthetics for surgery,” Mr. LaFratta says.

The financial burden of these delays is well documented. Costs incurred by outpatient surgery

centers in managing PONV have been shown to cost a center \$400 of revenue for a facility operating at or near full capacity.¹ Even facilities performing at less than 100 percent capacity incur \$200 in costs to treat a single episode of emesis when all costs are considered to manage the event including cleaning, redressing the patient, rescue medications and nursing interventions, everything down to the toothpaste.² And costs to manage a patient in painful distress can total \$100 per incident.³

Difference between local anesthetic plan and a traditional GA with morphine approach

General anesthesia carries an important role in providing surgical conditions with respect to patient sedation, amnesia, paralysis and



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physiologic homeostasis. What we're considering is a change from the opioid component of a traditional GA plan (for perioperative pain management) to local anesthetics delivered through strategically-placed analgesic catheters (inserted by anesthesiologists or surgeons, depending on the type of catheter), both reducing the reliance on high-doses of anesthesia maintenance drugs and opioids during surgery, and reducing opioid requirements for pain management after surgery. This type of intervention is well-documented to reduce the likelihood of PONV, provide effective pain management, and increase the reliability of a fast-tracking program.

Studies show that using local anesthetics for the surgical block allows patients to emerge more rapidly than patients under GA with morphine approach. Patients are able to exit the OR achieving PACU bypass criteria, and can be fast-tracked directly to phase II PACU in preparation for discharge.^{3,4} "This enables ASCs to re-examine patient flow, and take advantage of safely moving patients to more cost effective holding areas, avoiding bottlenecks that can otherwise occur," Mr. LaFratta adds.

Mr. LaFratta says, "When we help centers manage the primary endpoints of better post-op pain management and reduced PONV, a long list of secondary endpoints then become available to further reduce costs and open new revenue streams. Reduced adverse events can lead to shorter waiting times, reduced surgical variability, on-time starts and increased satisfaction. With more effective pain management, centers will experience more efficiency and high satisfaction, which can improve morale around the center."

Challenges to a new approach

RA may show significant advantages, but many centers have been reluctant to change methods for a variety of reasons. For one, GA with morphine has worked for them for decades, according to Mr. LaFratta. "GA perceptively offers an 'all-in-one' approach, with every component of anesthesia handled at once. RA adds a step to the process, and surgeons may worry this will slow cases," he says. However, evidence shows that what may take a few extra moments in pre-op will save the center time in the OR and PACU, allowing surgeons to actually see more on-time starts through improved patient flow.⁵ Parallel induction models of anesthesia improve OR efficiency and can reduce staffing costs by 7 percent compared to the traditional model.⁶

From a practical standpoint, the RA component of an anesthetic for the "next patient" can be induced during anesthetic maintenance

of the "current patient," and if "wake-up" (or emergence) time of the current patient is accelerated with pain management during surgery with local anesthetic nerve blocks, not only is emergence faster, but there are fewer symptoms typically caused by opioids and GA maintenance agents. A surgeon can close an incision with an awakening patient if the site of the surgery is numb.

Another limitation is the familiarity of the anesthesiologist at performing peripheral nerve blocks. "Some weren't trained in nerve block procedures; for those who want to learn, the training is out there," Mr. LaFratta says. "B. Braun Aesculap Academy is willing to design a local education workshop to provide didactic as well as hands-on training that we can customize for your program."

Likewise, ASC or hospital administration may be concerned about the costs of new equipment needed for an RA with nerve block approach. Leading anesthesiologists on this topic, Drs. Michael Kentor and Steven Orebaugh (University of Pittsburgh), say facility owners may worry that the cost of a nerve stimulator and needles, or to purchase an ultrasound machine, will add significant costs to their overhead. "But then remember that only 10 episodes of PONV each month could cost a facility up to \$25,000 a year, and the return on investment becomes significantly favorable," declares Dr. Kentor.

Patients may also add a barrier to the approach because many are unfamiliar with the procedure and may not understand the benefits. "If a surgeon tells a shoulder surgery patient, 'You will get a needle in your neck,'

versus 'With GA you will be asleep through your surgery,' most are not going to respond favorably to the RA technique. The RA message needs to be delivered in a more palatable fashion to reduce patient anxiety and let them learn and weigh the potential benefits of a nerve block approach, and that patients can still sleep through surgery without airway instrumentation," concludes Dr. Orebaugh. Inadequate patient education is not a contraindication to RA.

"Bringing a new anesthesia approach to your ASC is both possible and enticing, though sharing the message throughout to the entire ASC team, from start-to-finish, is most likely to lead to your center's success in improving patient care," says Mr. LaFratta. ■

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