

ERAS[®] in pediatric surgery: is it time for a change?

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The *Enhanced Recovery After Surgery* (ERAS[®]) concept was born with the aim of minimizing the negative effects of surgical stress response. In the late 1990s, various studies reported shorter hospital stays in adult patients undergoing colonic resection by combining a series of standardized measures, such as minimally invasive surgery, early postoperative mobilization and intake resumption, and reduced opioid use.

This gave rise to a paradigm shift in clinical practice, which led to the creation of an international group called ERAS[®] Study Group in 2001. In 2005, the ERAS[®] Study Group published the first ERAS[®] guideline in medical literature for perioperative management in elective colonic surgery in adults⁽¹⁾.

In 2010, the group reaffirmed its position as an actual society (ERAS[®] Society) aimed at optimizing perioperative care and improving the recovery of surgical patients through research, education, systematic review, and implementation of evidence-based, widely accepted practices published in a series of clinical practice guidelines (ERAS[®] guidelines).

All ERAS[®] guidelines deliver a perioperative management strategy through a number of recommendations based on the best scientific evidence available. They cover the whole surgical process, from the time surgery is decided upon to patient discharge. For them to be applied, all parties – surgeons, anesthesiologists, nurses, and above all, patients – should be involved. Therefore, this is a multimodal, cross-disciplinary, patient-centric strategy aimed at standardizing day-to-day clinical practice in order to improve postoperative results.

Up until now, this society has published more than 30 guidelines in various surgical procedures from different specialties, such as general surgery, heart surgery, thoracic surgery, obstetrics, urology, and traumatology. These guidelines have demonstrated to improve postoperative

results, with shorter hospital stays and decreased complications, morbidity and mortality, and hospital costs⁽²⁾.

The first experiences in *fast-track* or *enhanced recovery* protocols in pediatric surgery explored the application of a few elements separately, such as early postoperative intake resumption, limited application of catheters and probes, and reduced opioid use. Even though they were incomplete protocols, they already showed highly positive results in terms of shorter hospital stays without increasing postoperative complications⁽³⁾.

The first ERAS[®] guideline for pediatric surgery was published in May 2020. It consisted of 17 recommendations for the perioperative care of newborns undergoing elective intestinal surgery⁽⁴⁾. This group of patients represents a perfect goal for a clinical practice guideline like this as a result of their physiological characteristics, particularities of family context, great variability of surgical and perioperative management, and high postoperative complication rates.

It goes without saying there is growing interest in this type of strategies, which reflects in the increasing number of scientific publications discussing implementation in pediatrics over the last 10 years. However, even though ERAS[®] guidelines are widely accepted in adult patients, there seem to be some entry barriers in our specialty. First, generating high-quality scientific evidence in pediatric surgery is a difficult task, which complicates the formulation of specific recommendations and requires some of the measures applied in adults to be extrapolated to children. On the other hand, professionals and families are little familiar with this novel concept, which stands in the way of widespread adoption. And finally, the fact physicians ourselves fear a negative result makes it virtually impossible to replace the practices we are used to with new ones, in spite of being potentially beneficial.

To overcome all these hurdles, an ongoing process of education, problem identification and analysis, and most importantly, teamwork will be required. For an ERAS[®] protocol to be successfully created and implemented, all

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parties involved in this process should cooperate and commit to generating further and better scientific evidence confirming the benefits this strategy brings to our environment.

This paradigm shift may initially look complex, but in our view, ERAS® has come to stay, and we should be prepared to be part of this change.

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