ERAS – The dawn of a new era!

Every surgical patient entering a medical facility would like to have enhanced recovery following anaesthesia and surgery. This is a timeless concept and it was only early to late 1990s that this concept became formally recognised and the forerunner was the fast-tracking practices in some surgical branches but was limited to surgery of the gastrointestinal tract.\(^1,2\) As noted in the figure the development and progression of enhanced recovery after anaesthesia and surgery (ERAS) results in a remarkable reduction of time spent within a medical facility and allows the recipient of the surgical intervention to return to routine activities sooner rather than later [Figure 1]. The process requires multi-modal intervention both in terms of techniques, pharmacology and dedicated and qualified multi-provider participation. Fortunately, the interest by medical facilities and its practitioners has been tremendous allowing ERAS to encompass almost all surgical specialties and all age-groups. This has been possible because of a better understanding of physiology, overcoming prejudices (a major switch from fasting, stress and fluid loading, as shown in the figure) and demonstrating better patient acceptance and success. The ERAS society, an established entity formed in 2001 (was initially the ERAS study group), has formulated best practices and well-defined protocols. To this have been added specific guidelines and protocols by other sub-specialties.

Patients in many locations can now choose a centre that has a multidisciplinary team practicing ERAS protocols and discuss all the aspects of patient care with their clients for better outcomes. The discussion then becomes part of the patient charter. Specialty specific protocols have been promulgated and examples include preoperative respiratory physiotherapy for thoracic surgery, pre-emptive analgesia with blocks in orthopaedic surgery; no bowel preparation or nasogastric tube placement for gynaecological and urological surgery, preoperative weight loss, exercise and nutritional supplementation in bariatric surgery and also paediatric procedures.\(^2\) In 2015 the journal “Anesthesiology” dedicated its cover page to Henrik Kehlet, the renowned initiator and promoter of ERAS. In this journal he served as a guest editor for the topic of accelerated recovery.\(^3\) Recognising the importance and timeliness of this topic the editors of this journal decided to dedicate and produce a special peer-reviewed supplement discussing ERAS for the benefit of its readers. Thus, in this special issue the authors have summarised their experience and added the current practices following ERAS protocols. A few summaries of some of the authors are as follows:

Kendrick et al. reflect on hemodynamic monitoring for managing Goal directed fluid therapy to implement protocols with various tools, invasive and non-invasive which, used judiciously, result in improved clinical outcomes since fluid overload affects the endothelial glyocalyx.

Patil and others discuss methods of implementing pathways/protocols which help impact outcomes both in the adult and paediatric population with reduced opioid exposure and change in management strategies using a team approach.

Kaye and team emphasise its use in arthroplasties and its impact on hospital burden considering the increasing numbers of surgeries performed and the at risk elderly and the frail involved especially with new minimally invasive surgical techniques and anaesthetic protocols. The use of multimodal analgesia in an ambulant setting and implementing ERAS protocols has shown significant reduction in costs, morbidity and other benefits.

Moningi and associates highlight the anaesthesiologist’s role, focusing on preoperative optimisation and intraoperative management with strong recommendations for all interventions in various types of surgeries.

Elhassan et al. look at the perioperative surgical Home Concepts of patient centric, team-based approach to improve patient satisfaction and quality of care.
Iqbal et al. stress on the preoperative patient preparation with emphasis on smoking cessation, glycemic control, exercise amongst others and their positive impact on outcomes as part of the prehabilitation interventions when comparing ERAS and conventional protocols.

The important point to note is that these protocols are not only valid for elective surgical procedures but also for urgent (example, oncological) surgical needs. Can a well-optimised, low-risk emergent patient be subject to ERAS? We believe that this is possible as recently reported.[4] This will become increasingly self-evident when additional experiences get published.

Is it safe to say that ERAS can be used in populations worldwide? Will different carbohydrate loads offer any benefit? Can ERAS be implemented in smaller scale establishments with limited resources and settings? Will ERAS be successful when all components of the pathways cannot be implemented? All this remains to be evaluated and will be forthcoming in future studies. One important aspect of ERAS is the need for active patient participation for its success. In a country like India and also surrounding countries the role of the family is a key factor and can be used to advantage. Early involvement and education of the family with recovery of the patient in a home-like environment will not only increase patient satisfaction but it will significantly reduce costs. Newer technologies with home monitoring with wearable devices and wireless connectivity to record information and provide feedback will add to patient motivation while making early hospital discharge a reality.[5,6] It behoves us to conclude that ERAS should be the new standard of care for all procedures and surgeries. There is no anticipated downside. Instead it is an effective use and implementation of fully qualified human and other resources.

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