Guest Editorial

ERAS pathways and ambulatory surgery can reduce the global surgical burden: Role of anaesthesiologists

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It is estimated that approximately 5 billion people lack access to safe and affordable surgical care globally.[1] Lack of access prevents timely surgical intervention, leading to deterioration of the patient's condition and increasing the need for emergency surgery.[2] Emergency surgery increases healthcare utilisation and associated costs, particularly in patients with significant comorbid conditions.

Multidisciplinary, multimodal enhanced recovery after surgery (ERAS) pathways, designed to mitigate the undesirable effects of the surgical stress response, have revolutionised perioperative care by reducing postoperative complications and hospital length of stay without increasing post-discharge readmission rates.[3] ERAS pathways have allowed the migration of several surgical procedures from the inpatient to the outpatient setting.[4-6] Daycare surgery has been shown to reduce healthcare costs while improving postoperative outcomes and patient satisfaction.[7] Because the implementation of ERAS pathways reduces hospital length of stay and increases ambulatory surgery without compromising patient care and safety while reducing healthcare costs, the ability to perform more surgeries should increase. Taken together, this should reduce the global surgical burden and benefit low- and middle-income countries with the lowest access to surgical care.

Although ERAS pathways are considered the standard of care and are increasingly embraced worldwide, their implementation has been slow and patchy.[3,8,9] Similarly, acceptance of outpatient surgery, particularly in low- and middle-income countries, is extremely low. So, how can we improve the implementation of ERAS pathways and increase the migration of surgical procedures to the outpatient setting?

The first step in achieving this success is improving the coordination of care through the entire perioperative continuum – from the time surgery is contemplated until the return to activities of daily living postoperatively. A team approach including appropriate transition of care minimises fragmentation and variability, leading to a subsequent reduction in errors and inefficiencies that contribute to unnecessary and excessive resource utilisation and healthcare costs. The mainstay of ERAS pathways is standardised perioperative care, achieved through compliance with pathways, which may be improved through strong clinical leadership. Although the overall approach is multidisciplinary, anaesthesiologists are well suited to take the lead in this process. Anaesthesiologists have played an important role in the perioperative care of patients undergoing ambulatory surgery[10] and, as perioperative physicians, can facilitate the development and implementation of an enhanced

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recovery programme and address organisational challenges.

The next step is developing evidence-based, easy-to-implement, cost-effective elements within the ERAS pathway. Most ERAS pathways include 15–20 interventions, which makes the protocol cumbersome and difficult to implement. Although the relative contribution of individual interventions on recovery after surgery is unclear, a minimally invasive surgical approach is one of the core elements, as it minimises the stress response and associated adverse consequences. In addition, early postoperative oral intake and early ambulation are key in facilitating recovery.[11] Several interconnected elements can collectively influence these two elements. For example, an opioid-sparing (not opioid-free) general anaesthetic technique,[12,13] procedure-specific non-opioid multimodal pain management[14-16] and appropriate antiemetic prophylaxis contribute to early oral intake and ambulation. Furthermore, minimal preoperative fasting, adequate hydration during the fasting period[17] and avoidance of fluid overload are important components of an ERAS pathway. Of note, several elements have now become standard of care (e.g. preoperative optimisation of comorbid conditions, maintenance of normothermia, intraoperative antibiotic prophylaxis and venous thromboembolism prophylaxis).[3] These elements are easy to implement and do not require specialised monitoring, which is increasingly being promoted with questionable evidence. Thus, resource constraints should not be the reason for avoiding ERAS implementation. Importantly, it is clear that most of the critical elements are within the domain of anaesthesiology practice.

Another essential element for the success of an ERAS pathway is patient and caregiver education. Unfortunately, this has been neglected, particularly in low- and middle-income countries. Patients may be reluctant to follow recommendations because early oral intake and ambulation are radical modifications from a more traditional approach. In addition, patients may be reluctant to undergo ambulatory surgery due to unfounded concerns of post-discharge complications. However, patients could be persuaded to accept shorter hospital stays or ambulatory surgery with appropriate incentives like reduced surgical costs. Overall, it is necessary to set realistic expectations.

One of the major barriers to implementing ERAS protocols is the resistance to change among healthcare providers. This may be due to a lack of familiarity, scepticism, fear, organisational culture and time constraints. In addition, the 'knowing–doing' gap needs to be addressed.[8] In other words, even if the perioperative physicians may be aware of the best practices, their application in day-to-day practice is inadequate and/or outdated. Resistance to change may be overcome through education and training, integration of the pathways into the workflow, and fostering a culture of collaborative teamwork and mutual respect. Here again, anaesthesiologists can play a major role in addressing the factors that impede change.

In summary, perioperative care should continue to evolve if we are to be successful in improving patient safety and recovery. It is the responsibility of the leadership as well as individual practitioners to embrace this surgical paradigm shift enthusiastically. It is critical to put the patient at the centre of healthcare decisions.[18] Although it will be necessary to adapt the ERAS pathways for individual hospitals, protocol deviation should be minimal. Notably, the ERAS principles should be applied to all surgical patients. It must be recognised that even if ambulatory surgery is not possible and hospitalisation is planned, following the ERAS principles should reduce postoperative complications and enhance recovery. To implement ERAS in day-to-day clinical practice, it is necessary to provide updated, clinically relevant and easily adoptable recommendations. The factors that can delay postoperative oral intake (e.g. nausea, vomiting and ileus) and ambulation (e.g. inadequate pain relief, fatigue and cognitive dysfunction) must be addressed. Future research should evaluate the compliance and outcomes with the implementation of ERAS pathways in low- and middle-income countries.[19] Kehlet and Lobo[20] and Lobo *et al.*[21] have recently published the guidance for this research in perioperative care. Finally, it is essential to perform internal audits, assess perioperative outcomes, analyse individual performance and amend protocols when appropriate. We anaesthesiologists should distinguish ourselves as the foremost healthcare providers in the perioperative period.

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