Multimodal Rehabilitation Program in Thoracic Surgery

Programa de rehabilitación multimodal en cirugía torácica

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One of the main principles of medicine is that advances in knowledge and technological developments lead to improvements in patient care. In the area of surgery, 2 indisputably significant advances have emerged in the last 20 years, namely, minimally invasive surgery and multimodal rehabilitation programs, also known as Fast Track protocols or Enhanced Recovery After Anesthesia (ERAS) programs. The aim of both developments is to minimize surgical aggression, thereby improving post-operative recovery.

Comparative, validated data are available from numerous studies to show the benefits of these protocols for both patients (reduced morbidity and improved quality of life) and the healthcare system (shorter hospital stays), but the degree of implementation needs to be examined. ERAS protocols are in essence multidisciplinary, and a lack of coordination between the various specialist areas sometimes makes them difficult to introduce. But what are ERAS programs, exactly? To paraphrase Kehlet, the father of multimodal surgical rehabilitation, ERAS is a combination of perioperative strategies supported by evidence-based medicine and aimed at improving recovery after surgical interventions.

ERAS protocols revisit conventional perioperative practices and evaluate the specific key points of each procedure, analyzing the scientific evidence for the perioperative management of patients undergoing major surgery, to produce guidelines for helping coordinated teams improve postoperative care.

These protocols cover different phases in the care of surgical patients, and address issues such as shortening the preoperative fasting period, giving carbohydrate-rich drinks before surgery, detection of malnutrition in the preoperative period, need for preventive analgesia, early postsurgical mobilization, rapid reintroduction of oral intake of fluids and food, and prompt withdrawal of unnecessary catheters and tubes. Each of these individual measures is beneficial in itself; however, to maximize the benefit, they should all be implemented together. The level of compliance is important: Gustafsson pointed out the need for implementing over 70% of the measures, and it is thought that the application of these protocols successfully improves postoperative progress by reducing the stress response and quickly reactivating organ function.

Most of the scientific evidence is derived from colorectal surgery, since this is where the multimodal approach began. Successes there have led to these practices being extended to all surgical specialties.

In thoracic surgery, however, very little data is available, and the success rate is minimal, despite recommendations from the British National Institute of Clinical Excellence (NICE). In Spain, the Spanish Multimodal Rehabilitation Group (GERM) was formed in 2007, in an attempt to adapt the protocols to our social and healthcare setting. This initiative has produced good results in several studies, and the current goal of GERM is to work towards introducing these protocols into the care setting.

In thoracic surgery, first concerted multidisciplinary multimodal rehabilitation protocol for the management of patients lobectomized due to tumor disease has been published, following the initiative and concerted efforts of a small group of anesthetists, thoracic surgeons and nutritionists from 6 hospitals located in autonomous communities throughout Spain. This protocol, based on the essential phases of care, in line with GERM philosophy, and places emphasis of the quality of analgesia and rapid withdrawal of chest tubes. Moreover, it is sufficiently flexible to be adapted to most thoracic surgery departments in the country.

The evidence supporting ERAS programs is so overwhelming that it is hard to understand why they have not been implemented sooner. To be acceptable, all protocols must receive the agreement of all participating departments (Anesthesiology, Surgery, Nursing and Nutrition) and must involve the patient in the process and decision-making. To meet program objectives, the protocol needs to be followed closely, and reliable measurements are needed to analyze surgical outcomes, using indicators such as morbidity and postoperative stay. Outcomes must be audited with the aim of improving the protocol, and areas for improvement must be examined in interdisciplinary meetings, until these protocols become part of standard clinical practice.

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