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Enhanced Recovery After Esophageal Resection☆

Peter Vorwald, Marcos Bruna Esteban, Sonia Ortega Lucea, Jose Manuel Ramírez Rodríguez, Grupo de Trabajo de Cirugía Esofagogástrica del Grupo Español de Rehabilitación Multimodal (GERM)*◇

Servicio de Cirugía General y del Aparato Digestivo, Hospital Universitario Fundación Jiménez Díaz, Madrid, Spain

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ABSTRACT

Enhanced recovery after surgery (ERAS) is a multimodal perioperative care program which replaces traditional practices concerning analgesia, intravenous fluids, nutrition, mobilization as well as a number of other perioperative items, whose implementation is supported by evidence-based best practices. According to the RICA guidelines published in 2015, a review of the literature and the consensus established at a multidisciplinary meeting in 2015, we present a protocol that contains the basic procedures of an ERAS pathway for resective esophageal surgery. The measures involved in this ERAS pathway are structured into three areas: preoperative, perioperative and postoperative. The consensus document integrates all the analyzed items in a unique time chart. ERAS programs in esophageal resection surgery can reduce postoperative morbidity, mortality, hospitalization and hospital costs.

Rehabilitación multimodal en la cirugía resectiva del esófago

Palabras clave:
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RESUMEN

La rehabilitación multimodal constituye un conjunto de medidas perioperatorias que sustituye prácticas tradicionales respecto a la analgesia, la fluidoterapia, la nutrición y la movilización, entre otros. Su implementación está basada en criterios de medicina basada en la evidencia. Con base en la vía recuperación intensificada en cirugía abdominal publicada en el año 2015, una amplia revisión de la bibliografía y el consenso establecido en una reunión multidisciplinar del Grupo de Trabajo de Cirugía Esofagogástrica del Grupo Español de Rehabilitación Multimodal celebrada en 2015, se presenta un protocolo de rehabilitación multimodal en cirugía resectiva esofágica. Las medidas a aplicar se dividen

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* *Corresponding author.*
E-mail address: pvorwaldk@yahoo.es (P. Vorwald).

◇ Members of the Enhanced Recovery after Esophagogastric Surgery Workgroup of the Spanish Enhanced Recovery Group are listed in Appendix A.

en 3 bloques: preoperatorio, perioperatorio y postoperatorio. Su conjunto da lugar al documento de consenso que integra todas las medidas perioperatorias en una matriz temporal. La aplicación de protocolos de rehabilitación multimodal en cirugía resectiva esofágica reduce la morbimortalidad postoperatoria, la estancia y los costes hospitalarios.

Clinical guideline for enhanced recovery (ER) or multimodal rehabilitation (MR) in surgery or ''enhanced recovery after surgery'' (ERAS) can be defined as an agreed-upon, consensual, multimodal, evidence-based set of perioperative measures that restructure perioperative care.[1]

Traditionally, surgeons, anesthetists and nurses worked in individual ''compartments'' instead of integrating the multiple individual elements of perioperative care.[1]

The creation of these clinical pathways has meant a substantial change in the philosophy of perioperative care, when compared with traditional care. They have made it possible to ''standardize'' the processes, avoiding variability, creating predetermined trajectories of routine processes, better informing patients and family members and reviewing each of the items according to evidence-based medicine guidelines.[1]

In many areas of general surgery, this has meant making postoperative care more efficient, resulting in a reduction of hospital costs by optimizing resources and reducing hospital stay, as well as reducing morbidity and mortality. In this manner, perioperative care is restructured and adjusted to the minimum possible timeframe, while still providing patients improved comfort/well-being and shortened recovery, without compromising safety.

Kehlet and Wilmore[2] were the first to implement this type of measures in colorectal surgery. Over the last 5–10 years, there has been noticeable development of ERAS clinical guidelines in many areas of general surgery.

In 2015, the ER guidelines for abdominal surgery (RICA) were created in Spain, resulting from the close collaboration between the Spanish Group of Multimodal Rehabilitation (GERM) and the Ministry of Health, Social Affairs and Equality. In it, the perioperative management of abdominal surgery patients is compiled in a protocol.[3]

From the GERM, a multidisciplinary workgroup was created at the beginning of 2016 with the aim to develop ER recommendations for esophagogastric resection surgery.

In this paper, we present the resulting protocol, which was developed and agreed upon by GERM members based on a thorough review of the literature currently available and the clinical experience of a group of experts.

Methods

A total of 42 physicians from different specialties and work centers (32 surgeons, 5 anesthetists, 3 nurses and 2 nutritionists), with proven experience in the management of patients with esophageal disease, have developed this protocol, creating a time matrix that was agreed upon at the Second National Multimodal Rehabilitation Congress in 2016.

In addition to the RICA[3] recommendations for any type of abdominal surgery, an extensive search of the literature was carried out in the following databases: Cochrane Library, Medline, EMBASE, Scopus, Tryp database and DARE. The results obtained were evaluated using the National Institute for Health and Care Excellence (NICE) methodology, establishing the levels of evidence and degree of recommendations according to the GRADE[4] methodology (Tables 1 and 2).

This document presents recommendations and perioperative measures for esophageal resection surgery. These have been grouped into three stages: preoperative, perioperative and postoperative (Appendix 2).

Results

Indications and Contraindications

Candidates for the application of the recommended measures included patients who were undergoing esophagectomy (codes CIE-9: 42.40, 42.41, 42.42, 42.43, 42.99) and met the following criteria[3]:

- Ages 18–85
- Adequate cognitive ability (able to understand and cooperate)
- ASA I, II and III

The patients excluded from the application of this protocol were pediatric patients and those treated with urgent surgery.

Table 1 – Quality of Evidence According to the GRADE Methodology.

Quality of the evidence	Definition
High	High confidence that the estimated effect is very close to the actual effect
Moderate	Moderate confidence in the estimated effect: it is likely that the estimated effect is close to the actual effect, but substantial differences are possible
Low	Confidence in the estimated effect is low: the estimated effect may be substantially different from the actual effect
Very low	There is very little confidence in the estimated effect: it is very likely that the estimated effect is substantially different from the actual effect