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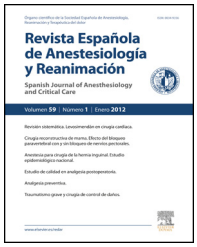

ORIGINAL ARTICLE

Anesthesia for bariatric surgery: 8-Year retrospective study: Are our patients now easier to manage?

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KEYWORDS
Bariatric surgery;
Perioperative management;
Laparoscopy;
Morbidity, mortality;
Length of stay

Abstract
Objectives: To review the perioperative management of patients who had undergone bariatric surgery in our institution during an 8-year period, with the aim of identifying variables that correlated with improved clinical outcomes and changes in perioperative practice.
Methods: This was a retrospective observational study of 437 patients who had undergone bariatric surgery from January 2005 to June 2013. Of these patients, 163 had undergone open or laparoscopic biliopancreatic diversion (Group 1), and 274 had been managed according to a Tailored Laparoscopic Approach Program (TLAP) (Group 2). We analyzed major cardiocirculatory, pulmonary, and surgery-related complications, mortality rate, intensive care unit (ICU) admissions, post-anesthetic care unit (PACU) length of stay, and perioperative management standards, throughout the study period.
Results: Changes were observed in anesthetic patterns and perioperative care standards during the study period: 25% of patients had combined epidural anesthesia in 2005, compared with none at present; ICU admissions decreased from 28.6% in 2005 to 3.1% at present; and time in PACU declined from a median of 23 h in 2005 to 5.12 h at present. Duration of postoperative opioid therapy was also significantly reduced (from 48 h to 6 h). Group 2 had a significantly lower mortality rate than Group 1 (0.37% versus 4.3%, respectively, $P = 0.004$).
Conclusions: In our institution, adoption of a TLAP for bariatric surgery has led to changes in perioperative care standards that have been followed by clear improvements according to morbidity, mortality and management indicators.

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PALABRAS CLAVE
Cirugía bariátrica;
Tratamiento perioperatorio;
Laparoscopia;
Morbimortalidad;
Duración de la estancia

Anestesia para la cirugía bariátrica, estudio retrospectivo de 8 años: ¿son más fáciles de tratar nuestros pacientes en la actualidad?

Resumen
Objetivos: Analizar el tratamiento perioperatorio de los pacientes que hayan sido intervenidos de cirugía bariátrica en nuestro centro durante un período de 8 años de duración, con el objetivo de identificar variables que puedan guardar relación con resultados clínicos mejorados y cambios en la práctica perioperatoria.
Metodología: Estudio de observación retrospectivo de 437 pacientes que se sometieron a cirugía bariátrica entre enero de 2005 y junio de 2013. De ellos, 163 fueron intervenidos mediante derivación biliopancreática abierta o laparoscópica (Grupo 1) y 274 fueron tratados conforme al Programa de Abordaje LaparoscópicoPersonalizado (Grupo 2). Analizamos las principales complicaciones cardiovasculares, pulmonares y quirúrgicas, la tasa de mortalidad, los ingresos en UCI, el tiempo en la Unidad de Reanimación y las pautas del tratamiento perioperatorio durante el período del estudio.
Resultados: Apreciamos cambios en los patrones de anestesia y las pautas de tratamiento perioperatorio durante el período del estudio: un 25% de los pacientes combinaron la anestesia epidural en 2005 en comparación con ninguno en la actualidad; los ingresos en la UCI disminuyeron del 28,6% en 2005 al 3,1% en la actualidad; y la estancia en la Unidad de Reanimación se redujo en una mediana de 23 h en 2005 a 5,12 h en la actualidad. La duración del tratamiento perioperatorio con opiodes también se acortó de manera significativa (de 48 a 6 h). El Grupo 2 presentó una tasa de mortalidad considerablemente más baja que el Grupo 1 (0,37 frente a 4,3%, respectivamente; p = 0,004).
Conclusiones: En nuestro centro, la implantación del Programa de Abordaje Laparoscópico Personalizado para la cirugía bariátrica ha fraguado cambios en las pautas de tratamiento perioperatorio que han supuesto mejoras evidentes en lo que a morbimorbilidad e indicadores de gestión se refiere.

Introduction

In a previous study in our institution, it was found that the adoption of a tailored laparoscopic Roux-en Y gastric bypass or sleeve gastrectomy approach in morbidly obese patients, as opposed to the previous indiscriminate open or laparoscopic biliopancreatic diversion (O-LBPD) approach, resulted in improved quality indicators and morbidity.[1] These findings led to a change in clinical practice: from 2010 onwards the O-LBPD approach was abandoned in favor of a Tailored Laparoscopic Approach Program (TLAP). According to this, patients with a BMI ≤50 underwent laparoscopic gastric by-pass, while those patients with BMI > 50, older than 55 years, or with severe cardiopulmonary or renal disease, underwent laparoscopic sleeve gastrectomy.[1]

With this retrospective study the aim is to describe the change in clinical practice in our institution over time, trying to identify the variables that have influenced this change, as well as the results obtained in terms of morbidity, mortality and management indicators. Our objectives have been: (1) to compare O-LBPD versus a TLAP as regards perioperative complications and various management indicators (length of stay, intensive care unit [ICU] and post-anesthetic care unit [PACU] admissions and time in PACU); (2) to analyze the anesthesia and analgesia management of patients who had undergone bariatric surgery in our institution from 2005 to 2013 differentiating between three periods: 2005–2007, during which all procedures were performed by O-LBPD; 2008–2010, when new TLAP was introduced coexisting with O-LBPD; and 2011–2013, when O-LBPD was definitively abandoned and all procedures were performed following TLAP approach.

Materials and methods

This retrospective observational study was approved by the Research and Ethics Committees of our institution, a tertiary care teaching hospital with more than 1500 beds. All adult patients (≥18 years of age) who had undergone bariatric surgery from 1 January 2005 to 30 June 2013, were included, with 18 cases of patients submitted to laparoscopic adjustable gastric banding and laparoscopic gastric pacemaker as part of specific research programs being excluded. The medical records of all patients in the study for 24–36 months were reviewed after their discharge.

To analyze the consequences of changes in clinical practice, the study was divided into two phases: in a first stage, two groups were formed: patients who had undergone O-LBPD (Group 1) and those who had undergone TLAP (Group 2). Anthropometric and other relevant patient variables and the presence of comorbidities were recorded (see Table 1). Outcome variables, including cardiopulmonary complications, defined according to the criteria proposed in our previous study,[1] in-hospital reinterventions, mortality following 3 months after hospital discharge and late postoperative complications (6 months following discharge), are listed in Table 1.

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