



## Original article

# Evaluation of the Impact of Preoperative Education in Ambulatory Laparoscopic Cholecystectomy. A Prospective, Double-Blind Randomized Trial<sup>☆,☆☆</sup>



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## ARTICLE INFO

## Article history:

Received 6 June 2017

Accepted 23 October 2017

Available online 23 February 2018

## Keywords:

Laparoscopic cholecystectomy

Outpatient laparoscopic cholecystectomy

Day surgery

Preoperative education

Patient education

## A B S T R A C T

**Introduction:** Outpatient laparoscopic cholecystectomy is a safe procedure and provides a better use of health resources and perceived satisfaction without affecting quality of care. Preoperative education has shown less postoperative stress, pain and nausea in some interventions. The principal objective of this study is to assess the impact of preoperative education on postoperative pain in patients undergoing ambulatory laparoscopic cholecystectomy. Secondary objectives were: to evaluate presence of nausea, morbidity, hospital admissions, readmissions rate, quality of life and satisfaction.

**Methods:** Prospective, randomized, and double blind study. Between April 2014 and May 2016, 62 patients underwent outpatient laparoscopic cholecystectomy.

**Inclusion criteria:** ASA I-II, age 18–75, outpatient surgery criteria, abdominal ultrasonography with cholelithiasis. Patient randomization in two groups, group A: intensified preoperative education and group B: control.

**Results:** Sixty-two patients included, 44 women (71%), 18 men (29%), mean age 46.8 years (20–69). Mean BMI 27.5. Outpatient rate 92%. Five cases required admission, two due to nausea. Pain scores obtained using a VAS was at 24-hour, 2.9 in group A and 2.7 in group B. There were no severe complications or readmissions. Results of satisfaction and quality of life scores were similar for both groups.

<sup>☆</sup> Please cite this article as: Subirana Magdaleno H, Caro Tarragó A, Olona Casas C, Díaz Padillo A, Franco Chacón M, Vadillo Bargalló J, et al. Valoración del impacto de la educación preoperatoria en la colecistectomía laparoscópica ambulatoria. Ensayo prospectivo aleatorizado doble ciego. Cir Esp. 2018;96:88–95.

<sup>☆☆</sup> The study was presented as an oral communication at the 23rd Surgery Symposium of the Hospitals of Catalonia on October 14, 2016.

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*Conclusions:* We did not find differences due to intensive preoperative education. However, we think that a correct information protocol should be integrated into the patient's preoperative preparation.

Registered in ISRCTN number ISRCTN83787412.

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## Valoración del impacto de la educación preoperatoria en la colecistectomía laparoscópica ambulatoria. Ensayo prospectivo aleatorizado doble ciego

### R E S U M E N

#### Palabras clave:

Cirugía mayor ambulatoria  
Colecistectomía laparoscópica  
Colecistectomía laparoscópica ambulatoria  
Educación preoperatoria  
Educación pacientes

*Introducción:* La colecistectomía laparoscópica ambulatoria es segura y proporciona mejor aprovechamiento de recursos sanitarios y satisfacción percibida, sin repercutir en la calidad asistencial. La educación preoperatoria ha demostrado disminución del estrés, del dolor y náuseas postoperatorios en algunas intervenciones. El objetivo principal del estudio es valorar el impacto de la educación preoperatoria sobre el dolor postoperatorio en la colecistectomía laparoscópica ambulatoria. Los objetivos secundarios fueron evaluar las náuseas postoperatorias, morbilidad, ingresos no esperados, readmisiones, calidad de vida y grado de satisfacción.

*Métodos:* Estudio prospectivo, aleatorizado, doble ciego. Entre abril de 2014 y mayo de 2016 fueron intervenidos 62 pacientes de colecistectomía laparoscópica ambulatoria.

*Criterios de inclusión:* ASA I-II, edad 18-75 años, criterios de ambulatorización, ecografía abdominal con colelitiasis. Aleatorización de pacientes en grupo A: educación preoperatoria intensificada, y grupo B: control.

*Resultados:* Sesenta y dos pacientes incluidos, 44 mujeres (71%), 18 hombres (29%), edad media 46,8 años (20-69). Media IMC de 27,5. Tasa de ambulatorización del 92%, 5 casos requirieron ingreso, 2 fueron por náuseas. La media del grado de dolor según EVA fue a las 24 h de 2,9 en el grupo A y de 2,7 en el grupo B. No complicaciones graves ni reingresos. La encuesta de satisfacción y el test de calidad de vida no mostraron diferencias entre grupos. *Conclusiones:* Las bajas cifras de dolor y complicaciones impiden evidenciar diferencias atribuibles a la educación preoperatoria. Sin embargo, un correcto protocolo de información se debería integrar en la preparación preoperatoria de los pacientes.

Registro ISRCTN con número de referencia ISRCTN83787412.

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## Introduction

The surgical treatment of cholelithiasis has traditionally been a procedure performed in hospitalized patients. The introduction of laparoscopic cholecystectomy radically changed the treatment of this disease and is now considered the gold standard for benign gallbladder disease.<sup>1</sup> Several prospective randomized studies have demonstrated the advantages of laparoscopic surgery: less pain and postoperative paralytic ileus, shorter hospital stay, early return to daily activity and decrease in total procedure costs.<sup>2-7</sup> All these factors have allowed for laparoscopic cholecystectomy to be progressively incorporated into short-stay and major outpatient surgery (MOS) programs.

According to the results of the first published study on ambulatory laparoscopic cholecystectomy in 1990 by Reddick and Olsen,<sup>8</sup> 45% of patients could be treated in an MOS regimen with minimal complications, especially young patients without a history of abdominal surgery.

Several studies have subsequently shown that ambulatory laparoscopic cholecystectomy is a safe technique offering a high degree of patient satisfaction and perceived quality.<sup>9-14</sup>

However, a high proportion of unexpected hospitalizations (37%)<sup>15</sup> have been attributed to the onset of nausea and pain in the immediate postoperative period.

The first ever research about the benefits of preoperative education was published in 1958 (Janis),<sup>16</sup> demonstrating that preoperative information reduces patient stress. Other studies have revealed that patients who have received preoperative information require less analgesia and recover faster.<sup>17</sup>

Our hypothesis is that the patients who receive preoperative education, as they are informed about the surgical and anesthetic procedure as well as the symptoms that may appear in the postoperative period, experience a lower degree of anxiety generated by the procedure, which helps to better control symptoms and recovery in the outpatient surgery regimen, while increasing the level of satisfaction.

The main objective of this study is to assess the impact of patient preoperative education and its effect on pain. The

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