ELSEVIER

Surgery for Obesity and Related Diseases ▮ (2018) 00–00

SURGERY FOR OBESITY AND RELATED DISEASES

Original article

Live surgery courses: retrospective safety analysis after 11 editions

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Received August 26, 2017; accepted December 8, 2017

Abstract

Introduction: Live surgery is a topic of interest at every meeting or course in the field of surgery. The potential of laparoscopy for live broadcasting makes it an excellent tool in continuing medical education. Surgeons who participate in live surgeries are usually experienced, but several conditions may influence the results and safety of a procedure.

Objectives: To analyze safety and outcomes in a series of patients who underwent surgery in the last 10 years in a live surgery course at our institution.

Setting: University public hospital in Spain.

Methods: Retrospective review of patients who underwent surgery during these courses from 2006 to 2016. Morbidity, mortality, and long-term results were analyzed.

Results: Of 107 patients, 74 (68.5%) were women, and 38 (35.2%) had revision surgery. Five had surgery during previous editions. The most performed procedures were Roux-en-Y gastric bypass (38.9%), sleeve gastrectomy (16.7%), and duodenal switch (14%). Ten cases were endoscopic procedures. Morbidity was 13% (14 cases), and 6 required early postoperative revision (5.6%). Most of the complications were Clavien types III and I. Bleeding was the most common (72.4%). There was no anastomotic leak, but 1 duodenal stump leak occurred. During follow-up, 6 patients had a surgical complication and 5 required revision surgery. There was no mortality.

Discussion: We found higher morbidity and reoperation rates. The conversion rate in long-term follow-up was higher. Despite the educational benefits, we should take into consideration the higher risk to our patients for future editions. (Surg Obes Relat Dis 2018;▮:00–00.)

Keywords: Live surgery; Bariatric Surgery; Safety

Medical education has evolved greatly. We have moved from master classes to self-teaching procedures and from live cases in operating theaters at university centers to live broadcasts that we can follow on our own mobile devices [1]. A very important part of this evolution was the development of laparoscopic surgery.

Before the arrival of laparoscopic surgery, live demonstrations were very difficult to broadcast or record; it was not possible to achieve clean and clear images of all steps of a procedure. Old videos of open abdominal procedures had poor image quality and usually obscured something. When

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https://doi.org/10.1016/j.soard.2017.12.008
1550-7289/

laparoscopy was introduced, surgical education became democratic, as everyone could see the same images as the surgeon.

Once the laparoscopic era began, medical education also changed and moved forward. Since then, live demonstration (LD), video broadcasting, and knowledge sharing became easy and accessible to nearly everyone [2]. This new era came with a demand for more courses and meetings in which LD was the main attraction [3]. These were usually performed by surgeons with extensive experience or well-known experts in the field. This was another attraction at these courses/meetings [4].

Theoretically, live surgery by an invited expert is a win-win strategy. First, the patient has the opportunity to undergo surgery by a well-recognized expert. Second, the institution has the privilege of hosting an expert surgeon to share his or her knowledge with its members. Third, the audience will have the opportunity to learn live and study from the best source. Despite all these benefits, there are some ethical issues from the patient's point of view to be addressed [5], such as the absence of confidence in an unknown surgeon. On the other hand, it has not been demonstrated that an invited expert would improve the outcome in either a conventional or selected complex case.

Finally, despite being experts, these invited surgeons faced circumstances that might affect their liability. They usually operated away from home, in an unfamiliar setting, with strangers surrounding them, far away from their home theater. The surgical material also might be different. Finally, the case would be selected by a third party. All these conditions could affect the final result, compromising patient safety. There is also another factor to take into account [2,5]: Some LDs have been used to present extreme surgeries, limited indications, or new devices, with conflicts of interest to be addressed [4].

Accordingly, some specialty societies began to limit the use of LD [2,6]. There is little evidence for the value of these sessions, and only a few papers about their outcomes and safety. Therefore, a primary reason to establish rules was to ensure patient safety and guarantee the efficacy of these educational tools.

Our institution organized a yearly basic course of LD. Every year, some of the best-known surgeons in the field of bariatric surgery came here and performed up to 14 cases in 2 days. Approximately 80 to 100 surgeons attend our course every year. After 11 consecutive years, we decided to evaluate our results, focusing on safety in these courses. The main objective of our study was to analyze the safety and patient outcomes of these courses for the last 11 years in a university public hospital with high volume and long experience in bariatric surgery.

Methods

This is a retrospective review of patients who underwent surgery in the International Bariatric Surgery Course presented by our institution. We evaluated medical records and electronic charts from all patients treated during these courses. Our Ethics Committee authorized this research.

The course

Since 2006, our department has presented the International Bariatric Surgery Course, with 2 days of LD, debates, and conferences. Surgeries were mostly performed by respected Spanish and international surgeons; our team also performed some of the procedures. All procedures were broadcast to our institution auditorium, where nearly 100 surgeons attended each edition. All surgeries were performed with live commentary and discussion between the audience and the surgeon.

All courses were authorized and approved by the hospital board. Since 2009, all editions have been accredited by the Spanish and Catalan Departments of Health, with credits for continuing medical education. Moreover, since 2010, all editions have been part of the Educational Program of the Spanish Society for Surgery of Obesity and Metabolic Disorders.

During broadcasting, we maintained patient anonymity at all times. No personal data other than the patient's condition were reported to the audience. All procedures were recorded and remain in our library to be used for educational proposes.

Patient selection

All cases scheduled for the courses were selected by our bariatric surgery team. Patients were informed during the preoperative period about the live broadcast and possibility of undergoing surgery by a member otuside of our team. The selection process aimed to combine our normal practice of primary and revision procedures, plus a search for new techniques and indications, or complex cases, in which the invited surgeons could demonstrate their expertise. Patients gave specific informed consent to participate.

Data analysis

We reviewed the surgical and discharge reports for information about the procedure and related morbidity or mortality. We also examined the follow-up charts in our prospective database to evaluate long-term complications, reoperations, and weight loss. Complications were reported and graded according to the Clavien-Dindo classification [7].

This was a descriptive retrospective study. Continuous variables were expressed as mean and range. Categorical variables were expressed as count number and percentage. No comparisons were done.