Case study

Conversion rate of laparoscopic cholecystectomies at the universitary hospital center ibn rochd : A prospective study over 3 years

Abstract:

Laparoscopic cholecystectomy is the gold standard in gallbladder surgery whatever the clinical context. Contraindications to laparoscopic cholecystectomy are exceptional, however, there is a significant proportion of patients in whom it cannot be performed successfully and conversion to open surgery will be necessary due to technical difficulties or intraoperative complications. Conversion should not be considered as a failure but rather as a security for the patient. Conversion is often related to surgeon, patient and possibly equipment factors. The aim of our study is to identify the indications and the rate of conversion to open surgery in 10 patients among 482 patients who underwent laparoscopic cholecystectomy in the general surgery department of the CHU Ibn Rochd of Casablanca over a period of 3 years from January 1/ 2014 to December 31/ 2016, and to compare them with the data in the literature.

Keywords : cholecystectomie;Conversion;laparoscopic

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Introduction:

Cholecystectomy is a procedure considered benign but its consequences can be severe in case of complications, which can lead to liver transplantation in extreme cases (1). Laparoscopic cholecystectomy is the gold standard in gallbladder surgery whatever the clinical context, otherwise conversion to open surgery will be necessary due to technical difficulties or intraoperative complications. Conversion to laparotomy should not be considered as a technical failure but rather accepted as a deliberate decision to change the operative technique often protecting the patient from complications. The aim of our study is to identify the indications and the rate of conversion to open surgery in 10 patients among 482 patients who underwent laparoscopic cholecystectomy in the genral surgery department of the CHU Ibn Rochd of Casablanca and to compare them with the data in the literature.

Methodology :

Our work is a retrospective, descriptive study of 482 patients who underwent laparoscopic cholecystectomy of which 10 patients had a conversion to laparotomy, over a period of 3 years from January 1, 2014 to December 31, 2016 within the general surgery department of the Ibn Rochd University Hospital of Casablanca and whose objective was to analyze our experience

in the conversion of laparoscopic cholecystectomies to conventional surgery and to compare the results with those of the literature. The inclusion criteria were patients of all ages, all sexes, with simple or complicated vesicular lithiasis, who had undergone laparoscopic cholecystectomy. The exclusion criteria were patients with suspected gallbladder cancer and patients operated on by conventional means from the outset.

Result:

The average age of the patients was 54 years with extremes ranging from 38 to 75 years. There was a clear female predominance with a sex ratio of 2.33% F/H. Hepatic colic was present in all the patients in our series, thus representing the most frequent reason for consultation, which was associated with a cholestasis syndrome in only one patient. The physical examination showed a positive Murphy's sign in only one patient

Abdominal ultrasound was performed in all our patients showing a thin-walled lithiasis gallbladder in 80% of our patients, a vesicular sludge in 10% of cases and a lithiasis cholecystitis in 10% of cases. A biliary MRI was performed in 40% of the cases, following a disturbed hepatic assessment, showing a main biliary tract of normal caliber with a thin-walled multi-lithiasic gallbladder in 90% of the cases and a lithiasic gallbladder with a thickened wall of 5 mm in the remaining cases.

the laparoscopic approach was practiced in all our patients, with per operative exploration Presence of :

- Adhesions with a vesicular plastron in 10%,
- Lithiasis cholecystitis in 10%,
- Dilatation of the principal biliary duct in 10%,
- pediculitis making difficult the dissection of the calot triangle in 10%.

Among the 482 patients who had undergone laparoscopic cholecystectomy, 472 were completed 97.93%, and 10 cases were converted to laparotomy, 2.07%. The time of conversion was before dissection of the calot triangle in 90% of the converted cases and after dissection of the calot triangle in 10%.

The approach to conversion was a Kocher laparotomy in all patients associated with systematic drainage by :

- subhepatic drain of the Redon in 40% of cases.
- Delbet slide and Salem probe in subhepatic in 50% of cases.
- Kehr drain in the principal biliary duct in 10% of cases.

Preoperative cholangiography was performed in 10% of cases showing a free and dilated main bile duct.

Postoperative follow-up was simple in all patients with an average hospital stay of 3 days in 40% of cases, 4 days in 30% of cases and 5 days in 30% of cases.

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Discussion:

Laparoscopic cholecystectomy is the reference treatment for benign gallbladder disease and allows earlier oral intake, shortens the length of hospital stay, promotes a quicker return to normal activity, and improves aesthetics and reduces postoperative pain compared to open cholecystectomy, However, some cases still require conversion to laparotomy (1) .despite the growing experience with laparoscopic surgery, approximately 2 to 15% of patients have had a conversion to open surgery for various reasons (2) the conversion rate in our study is 2.07% of cases This figure compares favourably with the rates reported in the literature (3) . Converted cases are associated with an increased number of infectious and other postoperative complications and an increased risk of additional procedures and a higher rate of readmission within 30 days (4) . conversion from laparoscopic to open surgery results in longer postoperative stays and higher morbidity and mortality rates in this patient group (5) statistically significant potential risk factors for planned laparoscopic conversion include acute cholecystitis, choledocholithiasis, emergency surgery, diabetes, neurological diseases, hypertension, cardiac diseases, other factors such as chronic cholecystitis, peritoneal adhesions(6). the patient's condition after ERCP and the condition after pancreatitis were not statistically significant as potential conversion factors. In addition, other authors have also taken into account: the patient's Body Mass Index, the thickness of the gallbladder wall(7)previous abdominal surgery, increased alkaline phosphatase activity and bilirubin levels, elevated white blood cell count, elevated body temperature and an American Society of Anesthesiologists (ASA) score greater than 3 (8) Limited experience of a physician performing laparoscopic cholecystectomy is also considered a statistically significant conversion factor (9) . some studies have shown that the risk of conversion increases with age by 1.05 times per year and in males is 2.44 times higher than in females (10) In spite of all these predictive factors of conversion, the decision to convert to laparotomy is individual and often subjective, taken by the surgeon during the operation (7). The main indications for conversion in our series were inflammatory adhesions preventing precise delimitation of the anatomy of the cystic duct. The overall mortality remains low or even zero in certain registers, some national reports mention 2.1% of major complications and 5.9% of minor complications (2). This morbidity varies in severity from a simple collection of the vesicular bed to a wound of the bile ducts of various degrees of complexity, the incidence of which is approximately 0.4%.

Conclusion:

Laparoscopic cholecystectomy has become the procedure of choice for the management of symptomatic gallbladder. However, there is still a significant proportion of patients in whom laparoscopic cholecystectomy cannot be performed successfully and for whom conversion to open surgery is required that is related to surgeon-related factors, patient-related factors, and possibly equipment. Our work reported a conversion rate that compares favorably with the rates reported in the literature.

Ethical Approval :

I declare on my honor that the ethical approval has been exempted by my establishment

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