

Evidence-based Medicine

Is laparoscopic cholecystectomy safe in patients with liver cirrhosis?

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INTRODUCTION

The incidence of cholelithiasis in cirrhotic patients is two-fold higher when compared to that of the general population. That is due to intravascular hemolysis, hypersplenism, increased estrogen levels and decreased gallbladder motility and emptying.

Cholecystectomy in cirrhotic patients is associated with a high rate of morbimortality, related to excessive blood loss, postoperative liver failure and sepsis. Since the introduction of the videolaparoscopy technique to treat cholelithiasis, it has been debated whether cirrhotic patients would benefit from this technique.

The objective of the present study is to compare the laparoscopic cholecystectomy to the open surgery in cirrhotic patients with symptomatic cholelithiasis.

METHOD

A literature review was carried out by searching the MEDLINE database using the following keywords (liver cirrhosis) AND (laparoscopic cholecystectomy) in the Clinical Queries interface (Therapy/Narrow). The search was ended on May 2011.

After titles and abstracts had been read, only controlled and randomized trials comparing the laparoscopic technique with the open surgery in cirrhotic patients with cholelithiasis were selected.

The analyzed outcomes were the incidence of intra and postoperative complications (liver function decompensation, hemorrhage, encephalopathy, operative wound infection) and time of hospitalization.

The analysis of dichotomous data was carried out using a 2 x 2 table and compared by the chi-square test. The analysis of continuous variables was carried out through the difference between means. Rejection level for the nullity hypothesis was set at a value ≤ 0.05 . The RevMan program was used to conduct the meta-analysis of the data.

RESULTS

This review included data from three randomized clinical trials¹⁻³, totaling 220 patients (108 in the laparoscopic cholecystectomy [LC] group and 112 in the open cholecystectomy [OC] group). In LC group, 76 patients were classified as Child A, 28 as Child B and 4 as Child C. In OC group, 75 patients were classified as Child A, 34 as Child B and 3 as Child C.

Intra- and post-operative complications. The incidence of postoperative complications was 15.7% in group LC and 32.1% in group OC. Laparoscopic surgery decreased the risk of complications in 17% (95% CI: 0.06 – 0.27; $p = 0.003$) when compared to the open surgery, being necessary to treat 6 patients to obtain this benefit (Figure 1).

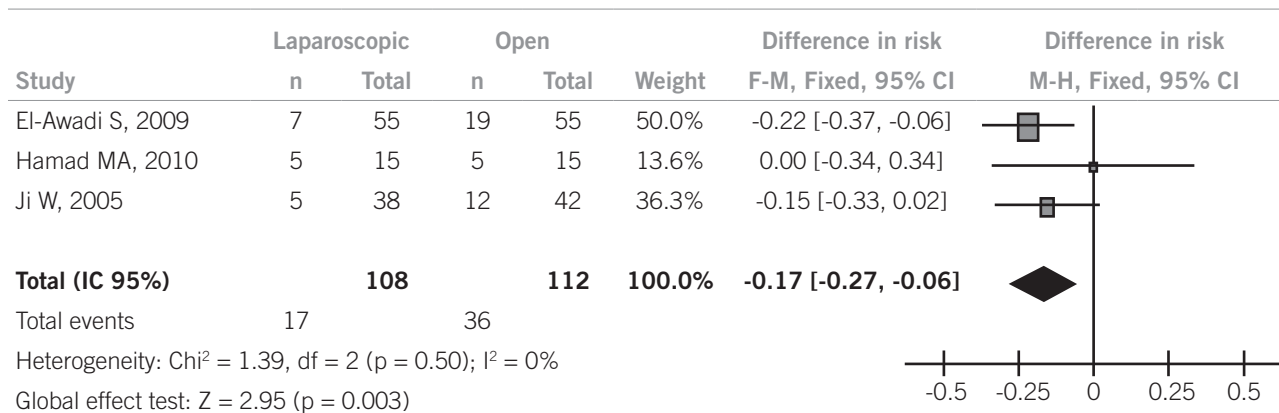


Figure 1 – Meta-analysis on intra and postoperative complications comparing the laparoscopic to the open surgery in cirrhotic patients with cholelithiasis.

Time of hospitalization. Patients submitted to laparoscopic surgery had a shorter time of hospitalization when compared with those submitted to open surgery, with a mean difference of 3.8 days (95% CI: 3.35 - 4.20 days; $p < 0.00001$) as shown in Figure 2.

CONCLUSION

In cirrhotic patients with symptomatic cholelithiasis, the videolaparoscopy is an effective and safe procedure and can be indicated as the first choice to attain clinical resolution.

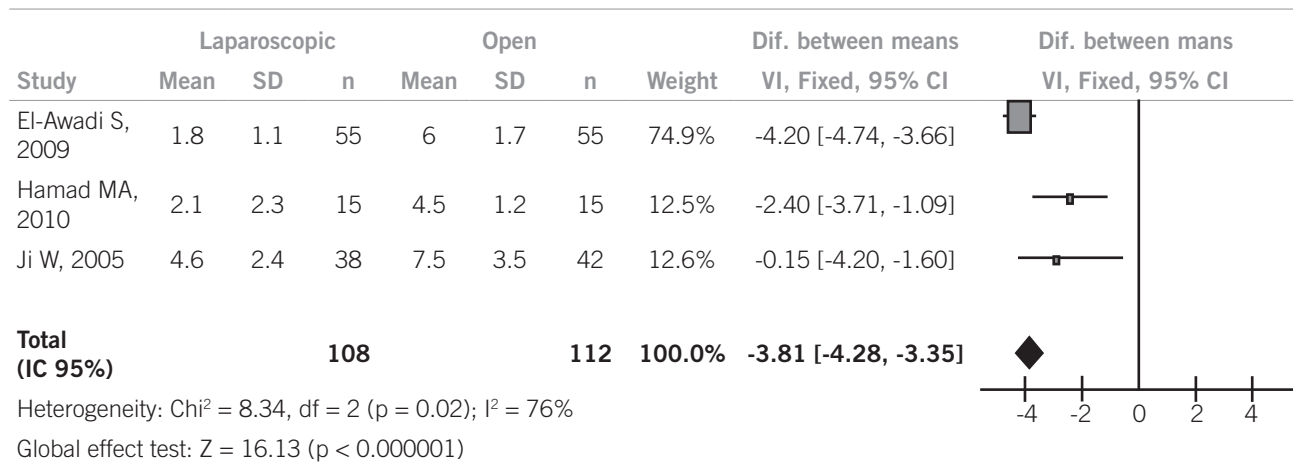


Figure 2 – Meta-analysis on time of hospitalization comparing laparoscopic to open surgery in cirrhotic patients with cholelithiasis.

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