SS 03 AB-09 11:00 (Can ultrasonography predict conversion of laparoscopic to open cholecystectomy Saifullah Khalid

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PURPOSE: Pre-operative prediction of a difficult laparoscopic cholecystectomy (LC) can help the surgeon prepare better for the intra-operative risk and the risk of conversion to open cholecystectomy. A prospective study was conducted from December 2008 to November 2010 that included 149 patients who underwent elective laparoscopic cholecystectomy for uncomplicated gallstone disease.

MATERIALS AND METHODS: The entire series consisted of 149 patients, in whom 145 procedures were completed laparoscopically, with 4 patients requiring conversion to open cholecystectomy. Patient characteristics and sonographic parameters were evaluated by univariate and multivariate analysis, using conversion to open cholecystectomy (OC) as a dependent variable.

RESULTS: In 4 of 149 patients (2.7%), LC was converted to OC. In the univariate analysis, contracted gallbladder (< 5 cm; Odds Ratio [OR] 0.776 95% confidence intervals [CI] 0.25 - 2.44), stone impaction (OR 2.6: 95% CI 1.12 - 5.1), thickened gall bladder wall (OR 3.81: 95% CI 1.11 - 13.11), and cholecystitis (OR 4.4: 95% CI 1.2 - 15.9) were able to predict the need for conversion. Logistic regression analysis defined only the sonographic sign of gall bladder thickness greater than 3 mm as a predictor of conversion. Forty nine, out of a series of total of 149 patients, had gallbladder wall thickness of greater than 3 mm by preoperative ultrasonography and of these 23 (46.9%) had difficulty in dissection and 4 (8.16%) required conversion to an open cholecystectomy.

CONCLUSION: A preoperative gallbladder ultrasonographic evaluation for symptomatic cholelithiasis, which documents a thick gallbladder wall (\geq 3 mm) with calculi, is a clinical warning for the laparoscopic surgeon of the potential for a difficult laparoscopic cholecystectomy procedure which may require conversion to an open cholecystectomy procedure. These results demonstrate that conversion to open cholecystectomy can be predicted based on parameters available preoperatively.