**Single incision versus three port laparoscopic cholecystectomy in symptomatic gallstones: A prospective randomized study**

By

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**Abstract**

*Background and aim*: Laparoscopic cholecystectomy (LC) became the standard treatment for symptomatic gallbladder disease. Single incision laparoscopic surgery (SILS) was developed with the aim of reducing the invasiveness of conventional laparoscopy. The aim of this study was to compare the clinical outcome of single-incision laparoscopic cholecystectomy (SILC) with three port laparoscopic cholecystectomy (TPLC).

*Patient and methods:*From October 2014 to October 2016, 178 patients with symptomatic cholecystolithiasis were randomized to SILC (89 patients) or TPLC (89 patients). The primary outcomeswere a postoperative pain score (at 6 hours and 1 day) and complications while the secondary outcomeswereoperative time, post-operative opioid requirements, length of hospital stay, and patient cosmetic satisfaction.

*Results:* Seven patients in SILC group required conversion either to additional port in six cases, or open cholecystectomy in one case; while in TPLC group, 1 case converted to open cholecystectomy. A part from one patient in the SILC group who had a massive bleeding from an aberrant hepatic artery; otherwise, no major intraoperative or postoperative complications occurred in both groups. There were statistically significant differences in the operative time (58.9 ± 18.6 min vs. 45.2 ± 11.8 min; with P = 0.0001), success rate (92.2% vs. 98.9%; with P = 0.001), conversion rate (7.8% vs. 1.1%; with P = 0.001), and cosmetic score (7.3 ± 1.4 vs. 6.7 ± 1.4; with P = 0.008). On the contrary; there were no statistically significant differences in visual analogue scale, opioid requirement, complications, and hospital stay between both groups.

*Conclusion:* SILC is a safe and feasible procedure in selected patients. The main advantages are superior cosmetic results.

***Key words:*** *Single incision laparoscopic cholecystectomy, three port laparoscopic cholecystectomy*