



In adult patients with symptomatic cholelithiasis, does operative management with single-incision laparoscopic cholecystectomy lead to decreased postoperative complications, pain, operative time, length of hospital stay, and cosmesis when compared to multi-port laparoscopic cholecystectomy?

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Abstract:

Background: Approximately 300,000 cholecystectomies are performed annually in the U.S, making it one of the 10 most common surgical procedures. In the last 10 years, new operative techniques, particularly the single-incision approach has emerged as an alternative to the current gold-standard, the laparoscopic cholecystectomy.

Purpose: The purpose of this analysis is to evaluate the post-operative complications, pain, operative time, length of hospital stay and cosmesis in patients undergoing a single-incision laparoscopic cholecystectomy (SILC) compared to the multi-port laparoscopic cholecystectomy (MPLC).

Materials and Methods: Our research search utilized: PubMed, OVID, and Google Scholar. Search terms used were “single-port laparoscopic cholecystectomy”, “single-incision laparoscopic cholecystectomy”, and “cholelithiasis”. Studies were limited to those written in English language, human participants, randomized control trials, and comparative studies. All meta-analysis, systemic reviews, and publications older than 10 years were excluded. Of the 51 articles found, 20 met inclusion criteria. In total, data from 2,777 patients between ages 18 and 85, all with symptomatic cholelithiasis, was reviewed.

Results: Most studies showed no significant difference in post-operative pain, length of hospital stay, or postoperative complications between both surgical techniques. Single-incision laparoscopic cholecystectomy was found to have overall significantly longer operative times while also having more favorable aesthetic outcomes when compared to multi-port laparoscopic cholecystectomy.

Conclusion: The single-incision laparoscopic cholecystectomy offers superior cosmesis at the expense of longer operative times. Although most of the analyzed studies



showed no significant difference in postoperative pain, hospital stay, and postoperative complications between the two groups, there is still conflicting data. Further research utilizing wider populations and larger sample sizes are needed in order to confirm both an equal safety profile as well as feasibility between both surgical approaches in treating symptomatic cholelithiasis.

Biography:

Jordan Brown is doctor and she is graduated from the University of Texas Medical Branch, Galveston, TX

Publication of speakers:

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3. Casaccia M, Palombo D, Razzore A, Firpo E, Gallo F, Fornaro R. Laparoscopic Single-Port Versus Traditional Multi-Port Laparoscopic Cholecystectomy. *JLS : Journal of the Society of Laparoendoscopic Surgeons*. 2019;23(3). doi:10.4293/jls.2018.00102.

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