

The great debate: Surgical outcomes of laparoscopic versus laparotomic myomectomy. A meta-analysis to critically evaluate current evidence and look over the horizon.

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ABSTRACT

Myomectomy is one of the most common surgical procedure in the field of gynecology. However, the role of laparoscopic myomectomy is still debated for many factors, including surgical considerations, safety and fertility concerns, long-term outcomes, and cost-related issues. The aim of this study is to evaluate the surgical peri- and post-operative outcomes of laparoscopic and abdominal myomectomy. A systematic search for studies was performed up to June 2023 through MEDLINE, Pubmed, Embase. Studies reporting the comparison of surgical and obstetrical outcomes in laparoscopic versus laparotomic myomectomy were included for the following outcomes: time of surgery, estimated blood loss, decrease of postoperative hemoglobin, hospital stay, intra-operative complication rates, postoperative complications rates, postoperative analgesic use, postoperative pain at 24 h and pregnancy rate. The meta-analysis was performed using the Cochrane Review software. Fifty-six relevant articles were retrieved through the process of evidence acquisition. Eleven articles met inclusion criteria, for a total of 2,133 patients undergoing laparoscopic or laparotomic myomectomy. The estimated blood loss [standard mean differences (SMD) 0.72, IC 95 % 0.22 to 1.22], the hospital stays [SMD 3.12, IC 95 % 0.57 to 4.28], were significantly lower in laparoscopic than in open group. No statistically significant difference in intra-operative and post-operative complication rates, in pregnancy rate and others obstetrical outcomes between two surgical approaches were found. The findings of present metanalysis suggest that laparoscopic myomectomy offers multiple benefits, including reduced blood loss, shorter hospital stays, and less postoperative analgesic need, without a significant increase in complication rates and similar results in obstetrical outcomes when compared to abdominal myomectomy. However, the presence of few randomized studies on selected population may limit the generalizability of the findings to the entire population. Therefore, more well-designed studies or large population programdata to draw definitive conclusions are therefore warranted.