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Incidence of Incisional Hernias Following Single Incision versus Traditional Laparoscopic Surgery: a Meta-Analysis

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5	Edward Felix		
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7	Siva Vithiananthan		Nice met analysis describing the much higher incidence of IH in SP surgery

Background: Single incision laparoscopic surgery has been proposed as an alternative to multiport laparoscopic surgery. This approach may increase the risk of incisional hernia due to the larger incision.

Objective: To compare, using a meta-analysis of randomized controlled trials, the risk of incisional hernia in patients undergoing single incision laparoscopic surgery to those undergoing traditional laparoscopic surgery.

Methods: MEDLINE and EMBASE databases were searched. Randomized controlled trials comparing single-incision laparoscopic surgery to traditional laparoscopic surgery and which reported incisional hernias over a minimum 6-month follow-up period were eligible. Risk of bias was assessed as outlined in the Cochrane Handbook. Pooled odds ratios were calculated using RevMan.

Results: Of 309 identified studies, 22 were included in this meta-analysis. Pooled results showed higher odds of incisional hernia following single-incision laparoscopic surgery relative to traditional laparoscopic surgery (odds ratio 2.83, 95% CI 1.34-5.98, p = 0.006, I^2 = 0%). There was no difference in the odds of incisional hernias requiring surgery (p = 0.10). Subgroup analysis found no difference in the odds of incisional hernias based on procedure type (p = 0.69) or method of follow-up (p = 0.85). The quality of evidence was determined to be moderate.

Conclusion: Single-incision laparoscopic surgery is associated with a three-fold increase in the odds of incisional hernia compared with traditional laparoscopic surgery.