

Absorbable Subcuticular Staples Compared With Suture for Cesarean Closure: A Randomized Controlled Trial [58].

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☐ **Abstract**

INTRODUCTION: Cesarean skin closure data are limited, although recent studies indicate subcuticular suture is superior to external metal staples. The INSORB subcuticular staple is designed to combine the speed of a stapler with the superior wound approximation of suture, but data on INSORB are limited. This study compared INSORB staples with subcuticular suture for cesarean skin closure.

METHODS: In this prospective, randomized, nonblinded, parallel-group trial, patients were stratified by prior cesarean delivery, body mass index (BMI, calculated as weight (kg)/[height (m)]²), and surgeon skill level. Eligible women were at least age 18 and 24 weeks of gestation. Exclusion criteria were BMI greater than 50, chorioamnionitis, intrauterine fetal death, and multifetal gestation. The primary outcome was operative time. Secondary outcomes included patient and surgeon satisfaction, needlestick injury, pain, wound complications, and cost.

RESULTS: Of 220 randomized patients, 206 were included in the final intention-to-treat analysis (103 per group). Baseline characteristics were similar. The subcuticular staple group had significantly shorter skin closure time (2.6 versus 8.5 minutes, $P \leq .001$) and trended toward shorter operative time (54.0 versus 58.0 minutes, $P = .053$). The cost reduction with subcuticular staples was \$172 – \$829 per case. There were no differences in analgesic use, wound complications, or patient satisfaction. One needlestick injury occurred with suture. Surgeons were more likely to recommend (97% versus 85%, $P = .004$) and use (98% versus 82%, $P \leq .001$) subcuticular staples in the future.

CONCLUSION: For cesarean delivery, the INSORB staple is faster and more cost-effective than subcuticular suture and has equivalent analgesic use, wound complications, and patient satisfaction.