Extraabdominal vs intraabdominal uterine repair at cesarean delivery: a metaanalysis

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CRD summary
This review compared extra-abdominal and intra-abdominal uterine repair on perioperative complications following caesarean delivery. The authors concluded that method of repair did not appear to influence the rate of perioperative complications. Potential selection bias, uncertainties in the review process and unclear study quality, made the extent to which the authors’ conclusion can be relied upon unclear.

Authors' objectives
To compare extra-abdominal and intra-abdominal uterine repair after caesarean delivery.

Searching
MEDLINE and The Cochrane Library were searched for published English-language articles. Search dates ranged from 1958 to June 2008.

Study selection
Randomised controlled trials (RCTs) of extra-abdominal (exteriorised) versus intra-abdominal (in situ) uterine repair after caesarean delivery were eligible for inclusion in the review. Retrospective studies were excluded. Trials included in the meta-analysis had to report at least one clinical endpoint from the primary outcomes of interest: perioperative complications, which included intraoperative (nausea and vomiting, hypotension, and pain) and postoperative complications (endometritis, febrile morbidity, wound infection, venous thromboembolism, pain, need for blood transfusion, and maternal death). Secondary outcomes of interest were operative time, estimated blood loss in milliliters and hospital stay. The authors reported that there were no differences in baseline characteristics of the included trials.

The authors stated neither how the papers were selected for the review nor how many reviewers performed the selection.

Assessment of study quality
The Jadad scoring system (five-point scale to address randomisation, blinding and withdrawals) was used to assess the quality of included trials.

The authors did not state how many reviewers carried out the quality assessment.

Data extraction
Intention-to-treat data were extracted to enable calculation of odds ratios (OR) and mean differences (MD) with 95% confidence intervals (CI). The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
Summary estimates and 95% CIs were pooled in a meta-analysis. The Cochran Q test was used to assess statistical heterogeneity.

Results of the review
Eleven RCTs (n=3,183) were included in the meta-analysis. There were 1,605 women in the exteriorised group, and 1,578 women in the in situ group. Quality assessment results were not reported.

There were no significant differences between groups in terms of postoperative or intraoperative complications, operative time and estimated blood loss. The rate of endometritis was higher in the exteriorised group, but this was not statistically significant and was based on heterogeneous data (p=0.02). Statistical heterogeneity was also reported for the outcomes of operative time and hospital stay, but results were not presented. Two maternal deaths were reported in the exteriorised group, but the risk was not statistically significant.
Authors' conclusions
The method of uterine repair at caesarean delivery did not appear to influence the rate of perioperative complications.

CRD commentary
The review question was clear and inclusion criteria appeared to be sufficiently detailed to allow replication. The search strategy indicated limited access to electronic databases and language and publication restrictions meant that associated biases were possible and relevant studies may have been missed. An appropriate quality assessment tool was applied to the included trials, but results were not reported. The absence of reporting on any aspect of the review process represented a substantial threat to interpreting reliability of the findings. Study details were provided, but absence of information on patient characteristics limited interpretation of generalisability. Given several potential methodological flaws, the extent to which the authors' conclusion can be relied upon is unclear.

Implications of the review for practice and research
Practice: The authors stated that extra-abdominal and intra-abdominal uterine repair were valid surgical options and the choice should be at the discretion of the surgeon.

Research: The authors did not state any implications for research.

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the reliability of the review and the conclusions drawn.