

HOW EFFECTIVE IS MESH IN PELVIC ORGAN PROLAPSE SURGERY? AN UPDATED SYSTEMATIC REVIEW OF RANDOMISED CONTROLLED TRIALS

Hypothesis / aims of study

To compare non-mesh repair with mesh or graft for anterior and/or posterior pelvic organ prolapse.

Study design, materials and methods

We undertook a systematic review of RCTs. We identified studies from the Cochrane Central Register of Controlled Trials, MEDLINE, MEDLINE-in-process, and clinical trials registers (last search June 2015). Risk of bias was assessed using the Cochrane Collaboration's risk of bias tool and the GRADE approach was used to assess the quality of evidence. The primary outcome was women's reported prolapse symptoms. Important secondary outcomes were the risk of adverse effects and undergoing further prolapse surgery. Fixed-effect subgroup meta-analyses were undertaken according to mesh type (absorbable mesh, biological graft, non-absorbable mesh and mesh kit).

Results

Thirty-five trials (6010 participants) were included, all with at least 12 months' follow-up. Most trials were at low risk of selection bias and had adequate allocation concealment.

High quality evidence indicated that women undergoing surgery with biological graft were more likely than those undergoing non-mesh repair to have persistent prolapse symptoms up to three years after surgery (35% versus 28%; RR 0.78, 95%CI 0.63 to 0.97). There was no evidence of a difference in prolapse symptoms between non-mesh repair and absorbable mesh (low quality evidence), non-absorbable mesh (moderate quality evidence) or mesh kit (low quality evidence).

Regarding adverse effects, there was no evidence of a difference when comparing non-repair to absorbable mesh (RR 1.75, 95%CI 0.56 to 5.45, moderate quality evidence), to biological graft (RR 0.81 95%CI 0.61 to 1.09, low quality evidence) or to non-absorbable mesh (RR 0.94, 95%CI 0.66 to 1.34, moderate quality evidence). Compared to surgery with mesh kit, surgery without mesh appeared to decrease the risk of adverse effects by 69% (RR 0.31, 95%CI 0.14 to 0.68) but this was based on very low quality evidence.

High quality evidence indicated that women undergoing non-mesh repair were 3.5 times more likely to require further prolapse surgery than those having surgery with mesh kit (RR 3.65, 95%CI 1.15 to 8.86). There was no evidence of a difference in numbers of women requiring further prolapse surgery when comparing non-mesh repair to absorbable mesh (RR 1.04, 95%CI 0.29 to 3.75; (low quality evidence), or biological graft (RR 0.69, 95%CI 0.45 to 1.05; high quality evidence) or non-absorbable mesh (RR 1.23, 95%CI 0.85 to 1.79; high quality evidence).

Interpretation of results

Non-mesh repair appears to be better than biological graft in terms of subjective prolapse symptoms, but there is little evidence of a difference for other types of mesh or graft. However, mesh kit appears to be better than non-mesh repair in terms of requiring further prolapse surgery but, again, there is little evidence of a difference for other types of mesh or graft. A paucity of reported data makes it difficult to reach meaningful conclusions relating to adverse effects.

Concluding message

This review presents the most up-to-date international review of the use of mesh in women having prolapse surgery. While individual comparisons favour non-mesh repair or mesh kit in some cases, the data relating to prolapse symptoms in the long-term are largely inconclusive and are based on variable quality evidence. The evidence relating to adverse effects is also inconclusive and, given the safety concerns regarding the use of mesh and the unlikelihood of new mesh trials being conducted, it is essential that the women in these existing trials are followed up in the long-term to inform the evidence base regarding the risk of prolapse symptoms, adverse effects and the need for further surgery.

Disclosures

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