43

Foon R[1], Toozs-Hobson P[1], Latthe P[1]
1. *Birmingham Women's hospital*

MESHES IN ANTERIOR REPAIRS: A SYSTEMATIC REVIEW AND META-ANALYSIS.

Hypothesis / aims of study
The last 10 years has seen an explosion in the number of commercially available meshes for prolapse surgery with little research evidence supporting their use. To date there have been no published systematic reviews looking at the use of mesh in anterior repairs. The aims of this study was to assess the objective recurrence and complications of adjuvant materials in the treatment of anterior vaginal wall prolapse

Study design, materials and methods
Search strategy: MEDLINE, EMBASE, CINAHL, (up to September 2007), CENTRAL (The Cochrane Library, Issue 3, 2007), the Cochrane Incontinence Group Trials Register (September 2007) and the National Library of Health were searched.

Selection criteria, data collection and analysis: All reports which describe (or might describe) RCTs and quasi-randomised trials of the use of meshes or grafts in anterior vaginal wall prolapse surgery were obtained with no language restrictions. Two reviewers independently extracted data on the participant's characteristics, study quality, population, intervention, recurrence and complications. The data was analyzed using the Review Manager 4.2.8 software.
The main outcome measures were objective recurrence and complications.

Results
Ten RCTs (1087 patients) were included in the systematic review. Meta-analysis showed a lower risk of objective recurrence after 1 year in the patients having an anterior repair with a biological mesh.

Table 1: Risk of recurrence after 1 year.

Mesh used	Odds Ratio	95% Confidence Interval
Biological	0.56	0.34 – 0.92
Synthetic mesh	0.44	0.21 – 0.89

Table 2: Number needed to treat to prevent recurrence at 1 year

Mesh	Number needed to treat	95% Confidence Interval
Biological	13	6.5 – 85.3
Synthetic mesh	6	3.0 – 33.8

The number needed to treat (NNT) with biological mesh to prevent recurrence at 12 months post operatively was 13 (95% CI 6.5 - 85.3) and with synthetic mesh was 6 (95% CI 3.0 – 33.8).
There was no significant difference in the risk of dysparenuia, voiding difficulties and prolapse symptoms. Importantly the re operation rates for prolapse did not appear to differ suggesting that the recurrent prolapse may have been less troublesome than the index prolapse.
The rate of mesh erosions was 0. 67% and 11.9% amongst studies using biological and synthetic meshes respectively.

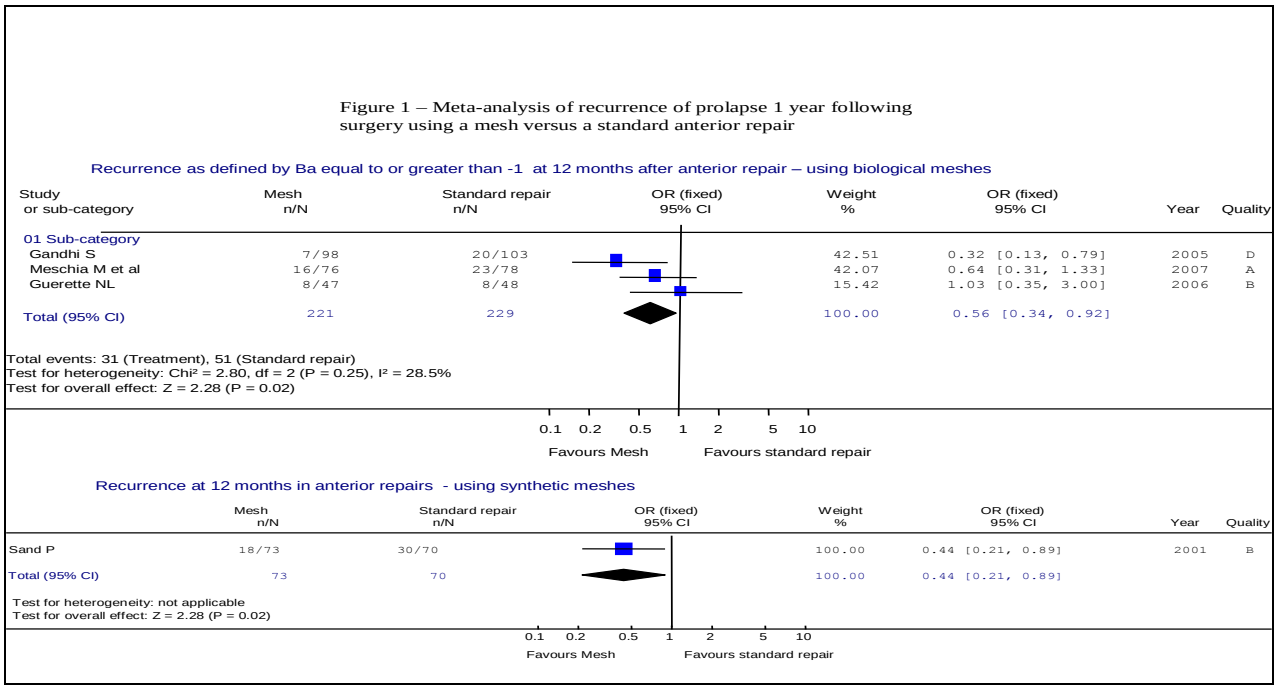
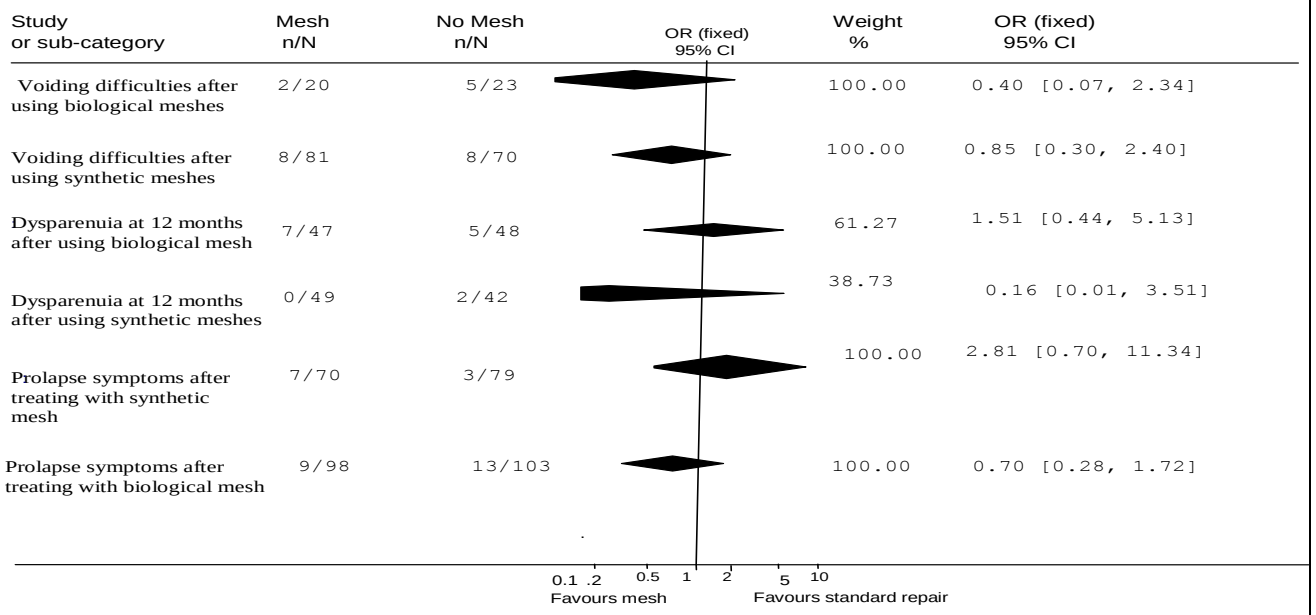


Figure 1 – Meta-analysis of recurrence of prolapse 1 year following surgery using a mesh versus a standard anterior repair

Figure 2 : Risk of complications following the use of meshes in anterior vaginal wall prolapse surgery



Interpretation of results

The evidence for the use of mesh in anterior vaginal wall prolapse surgery shows a reduction of recurrence after 1 year but the evidence is weak. There was no evidence to suggest any difference in the risk of dysparenuia, voiding difficulties and recurrent prolapse symptoms in the two groups. Therefore despite an objective difference favoring the use of mesh there was no difference subjectively or in re-operation rates.

Concluding message

Methodologically sound and sufficiently powered RCTs with longer follow up using a standardized method to determine success/failure is needed and we await the results of ongoing trials. Five year results may be a better end point and authors should be encouraged to publish these results.

Specify source of funding or grant	**Birmingham Women's Health NHSTrust**
Is this a clinical trial?	**No**
What were the subjects in the study?	**None**