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TRANSVAGINAL SURGERY WITH BIOLOGIC AND SYNTHETIC MESHES FOR ANTERIOR VAGINAL WALL PROLAPSE – A FOUR YEAR EXPERIENCE

Hypothesis / aims of study

To improve clinical outcomes for the correction of pelvic organ prolapse various new surgical techniques and materials have been proposed. Synthetic material has a cost-effective advantage but may present significant complications. Biologic material has associated with fewer complications.

The aim of this study was to evaluate the safety and efficacy of two different materials used in surgical treatment of the anterior vaginal wall prolapes, synthetic material (Gynemesh® or Prolift ®) and biologic (collagen) material (Pelvicol®).

Study design, materials and methods

Retrospective study, including 54 patients with cystocele (stage 2 or 3), who underwent a surgical procedure with synthetic or biologic material, from January 2004 to December 2007.

All the surgeries were performed under general/regional anaesthesia and by the same team that includes gynaecologists and an urologist.

We reviewed the following parameters: age, parity, overweight, constipation, previous abdominal surgery, menopause state, operation time, perioperative and post-operative complications, recovery time, follow-up time, recurrent prolapse.

We performed data analysis with Statistical Package for the Social Sciences version16.0 (SPSS 16.0).

This work was not supported by any industry.

Results

Fifty-four patients were included in the study, 22 (40.7%) with grade 2 cystocele and 32 (59.3%) with grade 3. The mean patients' age was 65.7 years old (min=40 and max=88). Fifty-one women (94.4%) were post-menopause. Only 1 patient (1.9%) was nulipara. Twenty-two patients (40.7%) were overweight, 20 had constipation (37.0%), 11 underwent previous abdominal surgery (20.4%). Stress urinary incontinence was present in 41 cases (75.9%). There were no significant statistic differences in those parameters between both groups.

Synthetic meshes were used in 36 patients (66.7%) and biologic meshes were used in 18 (33.3%).

Forty-four patients (81.5%) underwent other simultaneous surgery for benign gynaecologic pathology (vaginal hysterectomy or midurethral slings). Mean time of surgery was 67.8 minutes with synthetic meshes (min=27 and max=115) and 64.4 minutes with biologic meshes (min=25 and max=95). Recovery mean time was 4.4 days in both groups (min=2 and max=14).

Perioperative and post-operative complications were noted in 13 cases (36.1%) in synthetic meshes group (4 cases of mesh exposure requiring minor surgery, 3 cases of genitourinary infection, 2 cases of *de novo* urgency, 1 case of minor haemorrhage, 1 case of vaginal haematoma, 1 case of hip pain and 1 case of *de novo* stress urinary incontinence). In the biologic meshes group only 2 complications (11.1%) were reported (1 case of haemorrhage and 1 case of *de novo* urgency).

Follow-up mean time was 18.3 months in synthetic meshes group (min=4 and max=47) and 21.9 months in biologic meshes group (min=5 and max=44)

Recurrence was reported in 2 cases in synthetic meshes group (5.6%) and in 1 case in biologic meshes group (5.6%)

Interpretation of results

There were no significant statistic differences in population characteristics (age, menopause state, parity, overweight, constipation, previous abdominal surgery and presence of other benign gynaecologic pathology) between both groups. Surgery mean time and recovery mean time are similar in the two groups.

Perioperative and post-operative complications occurred most frequently in synthetic meshes group with a statistic significant difference. Recurrence rates are similar in both groups.

Concluding message

Both meshes are effective in treatment of cystocele, with similar mean surgical time, mean recovery time and similar recurrence rate. However, biologic meshes are associated with fewer complications than synthetic meshes.

Specify source of funding or grant	**None**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Obstetrics and Gynaecology ethics committee of our institution**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**