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A THREE-YEAR FOLLOW-UP OF TENSION-FREE POLYPROPYLENE MESH FOR VAGINAL REPAIR OF ANTERIOR VAGINAL WALL PROLAPSE

Hypothesis / aims of study

To study the three-year results of the anterior vaginal wall prolapse repair reinforced with a tension-free polypropylene mesh by the vaginal route.

Study design, materials and methods

This study is a prospective observational case series of 62 consecutive women with genital prolapse who underwent an original transvaginal procedure between October 1999 and March 2002. The study was approved by the Local Ethical Committee. The mesh used was the first polypropylene monofilament mesh designed for the vaginal route (GyneMesh^{TM}, Gynecare, Ethicon, France), measuring 6 cm in width by 15 cm in lenght. For all patients, we have performed the technique as follow. The bladder was completely dissected from the vagina and a window was created beneath the inferior pubic ramus to enter the retropubic space. The mesh was placed from the retropubic space to the inferior part of the bladder in a tension-free fashion. Vaginal hysterectomy and sacrospinous suspension were usually associated. We did not perform any anterior colporraphy, and the excess vaginal skin was not excised in order to avoid direct contact between the vaginal scar and the mesh during the postoperative scar formation. Associated rectocele repair with or without mesh and Tension-free Vaginal Tape were performed as appropriate.

Mean age was 63.2 $\pm$ 11 years old (36-85). Fifty-three patients were menopausal (85.5%) and 21 had preoperative normal sexual activity (33.9%). Fifty-eight procedures were primary cases (93.5%). Using the POP-Q system, preoperatively 6 women had grade II (9.7%), 43 had grade III (69.3%) and 4 had grade IV (6.5%) cystocele. Mean Ba point was 2.2 $\pm$ 1.8 cm. Preoperatively, mean Quality of Life evaluated by the patient using a visual analogic scale (range 0 to 10) was 7.8 ±1.7 /10. Vaginal hysterectomy, sacrospinous suspension, posterior repair with mesh and TVT were associated in 52 out of 54 non-hysterectomised patients (96.3%), 49 (79%), 4 (6.5%) and 13 (21%) out of the total population, respectively. We defined objective cure as satisfactory (grade 1) or optimal (grade 0) outcome.

Results

Mean operative time was 99 minutes (50-120). No operative complications occurred. Mean hospitalisation stay was 3.8 days (2-7). Mean follow-up was 36 months (range 24 to 53). All but one patient returned for follow-up. At follow-up, 53 patients out of 61 were cured (86.9%), 7 (11.5%) had grade II cystocele and one had grade III cystocele (1.6%). Mean Ba point was -2.4 $\pm$ 1.2 cm. Post-operative Quality of Life was significantly improved: 2 ±1.3 /10 ($p<.001$). There were no postoperative infections of the mesh. There were a total of seven vaginal erosions of the mesh (11.5%), which occurred from 6 weeks to 6 months after the procedure. Vaginal erosions had been successfully treated in 6 patients by a local estrogenic therapy (n = 3) or by simple excision (n = 3). We only had to remove the total mesh once, for a recurrence of vaginal erosion. Twenty-eight women return to postoperative sexual activity (45.9%), in whom 7 de novo dyspareunia were reported and three patients complaint with significant pain (10.7%). The recurrence rates of vault prolapse and rectocele were 2 (3.3%) and 9 (14.8%), respectively.

Interpretation of results

The faisability and efficacy of anterior vaginal wall prolapse repair by the vaginal route using a tension-free polypropylene mesh was demonstrated with a three-year follow-up, both objectively and subjectively. Using the first generation of vaginal mesh, vaginal erosions and dyspareunia rates were high. If vaginal erosions was usually a minor complication, recurrence of vaginal erosions and severe dyspareunia could occur and could necessitate the total removal of the mesh.

Concluding message

The long-term objective cure rate of anterior vaginal wall prolapse repair reinforced with a tension-free polypropylene mesh by the vaginal route was 86.9%. However, we observed a high rate of vaginal erosions and dyspareunia which necessitate to change the prosthetic material for specially designed low-weight meshes.