

MESH TREATMENT OF PELVIC ORGAN PROLAPSE : RISK FACTORS AND MANAGEMENT OF VAGINAL EROSION.

Hypothesis / aims of study

The use of prosthetic mesh for cure of pelvic prolapse is actually increasing. This new surgical approach is correlated with specific problem such as synthetic tissue tolerance. Vaginal erosion is not an uncommon complication with the use of mesh to augment surgery for pelvic organ prolapse.

The aims of this study are, first to identify risk factors of vaginal erosion after pelvic mesh repair and second, to describe management of these patients who present mesh exposure.

Study design, materials and methods

Two hundred and thirty patients were referred for pelvic organ prolapse from January 2002 to June 2003.

Cystocele was present in 200 (87,83%), uterine prolapse in 145 (63,04 %), rectocele in 190 (83,04%) and stress urinary incontinence in 136 (59,57%). The mean age was 64 (range 37 to 81 years). Fifty five had previous hysterectomy (23,91%), 34 previous prolapse surgery (14,78%) and 19 previous stress urinary incontinence surgery (8,26 %).

Each patient was treated surgically using a transvaginal polypropylene tension-free mesh. Prolene[®] Mesh[®] was used in 45,6% of cases and Prolene[®] Soft[®] in 53,0%. Cystocele repair used anterior mesh anchored transversally between the arcus tendineus with 2 arms each side through obturator foramen. Rectocele repair used posterior mesh anchored transversally between sacro spinal tendineus. Simultaneous hysterectomy was performed in 186 patients (80,9%). TVT was performed for stress urinary incontinence in 110 (48,2%).

The incidence of vaginal erosion was recorded at 3 months. Univaried analysis was carried out comparing clinical factors with the incidence of vaginal erosion in order to define risk factor.

Results

Thirty cases of prosthesis erosions were recorded (13%). In all cases, these erosions were located on suture line of the anterior repair. Regarding the clinical presentation, erosion was generally suspected because of leucorrhoea, blood stand discharge or dyspareunia. For asymptomatic patients, erosion was discovered at routine physical examination. Prosthesis erosion occurred from one to 10 months following intervention.

Risk factors of erosion were: cystocele repair with anterior mesh ($p = 0,03$), simultaneous hysterectomy ($p = 0,003$) and T-shaped anterior colpography ($p = 10^{-5}$). There was no difference between Prolene[®] Mesh[®] and Prolene[®] Soft[®].

Regarding vaginal erosion management, 7 patients had complete resolution after medical treatment with vaginal antiseptics. Twenty three patients (76%) required surgery to remove a part of the mesh. Among these 23 patients, 2 needed it twice (8,7%) and even the last one needed three times (4,3%). After partial prosthesis removal ($n = 23$), one patient developed a vesico vaginal fistula. However there were no other complications.

Interpretation of results

Simultaneous hysterectomy increased the risk of mesh exposure to a factor 7. T-shaped anterior colpography increased the risk of mesh exposure to a factor 6.

To decrease mesh erosion incidence, we recommend limiting the size and the number of vaginal incision for prolapse repair, to perform transversal incision in anterior vaginal wall and finally to avoid simultaneous hysterectomy. These technical modifications would be able to reduce the rate of mesh exposure to 5 %.

In this study, medical treatment only permits a cure of vaginal erosion in 24 %. Surgical treatment (partial prosthesis resection) was necessary in 76 %.

Concluding message

In conclusion, it seems that most significant risk factors are related to surgical protocol: size and number of colpotomy and simultaneous hysterectomy.

Concerning management of mesh erosion, further studies are necessary, first to prevent this complication and second to evaluate new therapies enhancing healing process.

Mesh erosion

