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MANAGEMENT OF VAGINAL MUCOSA EROSION AND MESH EXTRUSION AFTER GENITAL PROLAPSE SURGERY WITH POLYPROPYLENE MESH.

Hypothesis / aims of study

Genital prolapse affects more than 50% of multiparous women and this condition affects the quality of life.[1] The classic surgical techniques have a high recurrence rate estimated between 5 and 40% for cystocele. For these reasons surgeons beginning to applied meshes in order to avoid recurrence. But any mesh not the same, should be soft polypropylene. Julian reported a 100% success in the anatomical treatment of cystocele with Marlex mesh, versus 66% in control cases treated with anterior colporraphy. But Julian reported a 25% of complication in these patients with best correction.[2] The complication most feared by surgeons is the exposure of the mesh and having to remove.

We hypothesise that the use of polypropylene mesh type I has a low risk of vaginal erosion and extrusion, and if we take all necessary care the solution is easier and it has a low morbidity.

This study aims to determine the incidence and management of erosion and extrusion mesh after genital prolapse surgery repair.

Study design, materials and methods

Prospective study in 249 consecutive women admitted for genital prolapse repair with tension-free vaginal polypropylene type I mesh guided by trocar, at Urogynecology and Vaginal Surgery Unit, Obstetrics and Gynecology Department, Clínica Las Condes, Santiago, Chile. This study was conducted between July 2006 and January 2010. All women had symptomatic cystocele or rectocele type II, III or IV according the pelvic organ prolapse quantification (POP-Q).

The genital prolapse was corrected by standardized technique with Prolift System or Perigee and/or Perigee. The follow-up evaluations were at one week, one month, six months and when completed one year after the operation. In every evaluation the vaginal mucosa was examined for possible erosion or extrusion of the mesh. The evaluations included detailed history taking about possible symptoms.

Results

A total of 249 meshes were applied in 227 women. The vaginal erosion was observed in 16 cases (6.4%), corresponding to the anterior compartment in 11 (11/142, 7.7%) women and 5 (5/107, 4.7%) cases for posterior compartment. The vaginal erosion was observed between 1 and 6 months. In anterior compartment 8 patients were asymptomatic and 3 were symptomatic with vaginal discharge. In posterior compartment 4 cases were asymptomatic and 1 case was symptomatic with vaginal discharge and dyspareunia. All women with erosion have undergone local therapy using oestrogen (estriol) cream. In 9 patients no modification was observed and was necessary excision of the mesh in the office. In any of these women vaginal mucosal closure was necessary.

The mesh extrusion was observed in 4 (4/249, 1.6%) corresponding to 3 (3/142, 2.1%) cases in anterior compartment and 1 (1/107, 0.9%) case in posterior compartment. The extrusion was observed between 1 and 6 months. All presented vaginal discharge and 2 cases presented dyspareunia. In all these women required partial excision of the mesh and vaginal mucosal closure, under anaesthesia in the operating room and then have undergone local therapy with oestrogen. The surgical excision in operating room was ambulatory in the 4 cases. The size of extrusion mesh was between 1 and 2 centimeters. The surgical time ranged between 10 and 25 minutes for excision of the extrusion mesh. All women after surgery used preventive local therapy with oestrogen. None women required repeated resection because of recurrence.

Interpretation of results

In our series the results showed a low risk of complication with mesh used to correct genital prolapse. However, serious cases have been reported. To reduce the risk of erosion and extrusion mesh we must use approved meshes with standard techniques. The mesh must be macropore, monofilament polypropylene in order to avoid the infection that is a risk for complication like erosion and extrusion in the vaginal wall. Another important point is the quality of the vaginal mucosa, which should have a good trophism to avoid applying meshes in vagina with thin mucosal. When the erosion is under one centimeters a simple using local therapy should be a good solution. In some cases a simple resection is required in the office. When the extrusion of the mesh is greater than one centimeter probably requires surgical resection and closure in operating rooms, but is a fast procedure. Some publication report that extrusion may be increases to up to 10% in reconstruction surgeries using graft material to reinforce the pelvic floor.[3] But according our experience if we take the necessary care and use the mesh only in appropriately selected cases will reduce the possibility of exposure of the mesh and if that happens the solution is probably easier and faster. For these reasons it is best that the use of reinforcing mesh is performed by experienced surgeons. Also these physicians are able to resolve and avoid potential complications, taking the necessary care described. Undoubtedly, the larger meshes are associated to extrusion. The appropriate mesh, appropriate patient and appropriate surgeons must be chosen in order to reduce the erosion or extrusion mesh. And if it occurs probably will be easier to resolve. In our series only 4 cases (1.6%) required ambulatory surgical excision in operating room.

Concluding message

The vaginal mucosa erosion and mesh extrusion is a possible complication associated to polypropylene mesh used in the genital prolapse correction surgery. According our results the management of vaginal erosion and mesh extrusion should be simple and is associated with a low rate of morbidity. It is not necessary to remove the entire mesh. Patients admitted to prolapse surgery correction with mesh should be informed about this possible complication.

References
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