



Surgical Management of Relapse of Multicompartment Pelvic Organ Prolapse after Laparoscopic Lateral Pop Suspension

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Clinical Video

We want to demonstrate our surgical approach for the repair of multi compartment pelvic organ prolapse relapse after lateral POP (Pelvic Organ Prolapse) suspension, anew alternative procedure to the laparoscopic sacrocolpopexy, described in few papers, with the use of mesh fixation technique during sacrocervicocolpopexy, due to the lack in literature [1-4]. The technique of laparoscopic lateral suspension with mesh was first reported by Dubuisson [5] in 1998 for the treatment of genital prolapse. The laterosuspension avoids both the risk of vascular injury and nerve damage of laparoscopic sacrocolpopexy. Several modifications were described but the operation is now following a standard surgical procedure, which was not modified since 2003. The latest results were recently published [6,7]. Goals of surgical treatment are to improve symptoms and repair the pelvic support anatomy, more hard in a symptomatic relapse. There was no standardized procedure to treat these patients. Recurrences were treated either by laparoscopy or by vaginal route. We placed the patient in lithotomy position with both arms near the body and the thighs spread moderately and bent upwards. After appropriate preparation and draping, we introduced a Foley catheter in the bladder and a Circular Anal Dilator (CAD) of PPH kit (Ethicon Endo Surgery) through the anus. The equipe position was: surgeon on the right side of the patient, first assistant to the left side of the surgeon, second assistant between patient's legs. The pneumoperitoneum was established via subumbilical open technique, and a 30° laparoscope was introduced. One 10 mm trocar was inserted under vision into the cross-between umbilical-transverse line in the right side and another 5 mm trocar was inserted symmetrically in the left side. In our step-by-step explanation of the surgery, using video (instructive video), approved by the local Institutional Review Board of University Hospital of Bari, Policlinic of Bari, 1st operative unit of obstetrics and gynecology, all the crucial steps of our surgical approach were visualized. According to the literature, this type of correction is for the first time described. Urodynamic studies, including uroflowmetry, cystomanometry, pressure flow study and residual urine volume, were performed before surgery.

The patient was a 54-year-old woman, affected by a multi compartment pelvic organ prolapse, arose after a previous laparoscopic lateral POPs performed 4 years ago, in another hospital. A 5 mm skin incision was made on both sides at 2 cm above the iliac crest and 4 cm posterior to the anterior superior iliac spine. In the first step, was evidenced the previous mesh, and a complete adhesiolysis of fibrotic tissue on prevescical space was performed, followed by a subtotal hysterectomy. Uterine manipulator, left in place, was useful because it offers appropriate exposure of the posterior vaginal fornix and Douglas pouch. The vesicovaginal space was found between the bladder and the anterior vaginal wall in the fascia plane, after dissection of previous mesh edge, from anterior scar retraction zone and parametrium. If needed, the bladder was filled in a retrograde manner with 200 ml to 300 ml of a blue-colored serum to facilitate the dissection. Posteriorly, the rectovaginal septum was opened distally to the perineal body and the anorectal junction. The promontorium was dissected, and the posterior parietal peritoneum was vertically incised on the right pelvic sidewall to the pouch of Douglas. Then the rectovaginal septum was dissected to the anal cap, while laterally exposing the puborectalis (levatorani) muscle on each side. Middle rectal vessels were coagulated. The vesicovaginal space was then dissected. The final step was the placement of anterior and posterior

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Video 1: Step-by-step explanation of the surgery.

meshes, which were fashioned on the anterior and posterior vaginal wall and cervical plane, after optimal mobilization of the apex of the vagina. Our team implanted the meshes to only 8 points: two on the puborectalis muscle on each side without tension; two on the anterior vaginal wall at the level of the bladder neck; and one on each side of the cervix for the reconstitution of the pericervical ring. The stitch fastened one of the two meshes to the anterior paravertebral ligament at the level of the sacral promontory, and the peritonization was complete. The operative time was of 133 minutes. Our technique was simple (owing to fewer laparoscopic stitches) with minimal operative difficulty. We have provided an adequate surgical management of relapse of multicompartiment pelvic organ prolapse after lateral POPS, which constitutes a real challenge for urogynecologists [8]. Tissues were weakened and cleavage planes were difficult to find, but with our surgical reinforcement, we obtained a satisfactory tension and suspension with anatomical restoration. Posterior colpoperineorrhaphy was not associated for lack of perineal insufficiency. The patient was discharged two days after surgery. Follow-up at six month confirms the good functional and anatomic outcomes obtained with laparoscopic repair using mesh. We believe that our technique allows an appropriate surgical repair that often is difficult to obtain in a multicompartiment POP relapse. With this approach, the excessive anteriorization of the vagina was decreased, which leads to the widening of the space of Douglas.

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