

LAPAROSCOPIC SACRAL COLPOPEXY: TECHNIQUE DESCRIPTION

Synopsis of Video

When surgical repair is indicated for vaginal vault prolapse, either vaginal or transabdominal approach is feasible, however, higher success rate has been reported for the transabdominal approach (1). The transabdominal repair may be preferred after failed vaginal repair, concomitant abdominal surgery and when the surgeon has no experience with the vaginal approach. Abdominal sacral colpopexy is the most widely performed method of transabdominal correction of vaginal vault prolapse

We describe a laparoscopic sacral colpopexy performed in a 74 years old lady with a bothersome high grade vaginal vault prolapse causing limitations of her routine activities; the prolapse has been increasing gradually since she underwent abdominal hysterectomy 10 years ago.

Preoperatively, the patient receives clear diet one day before the procedure and intravenous first generation cephalosporin is given one hour previously. The patient is secured in a Trendelenburg lithotomy position because it allows simultaneous vaginal and abdominal approach. The procedure commences with open pneumoperitoneum for safety reasons, as the adhesions caused by previous surgery increases the risk for complications related to the closed approach with Verress needle. The pneumoperitoneum is kept throughout the procedure up to 15 mmHg intra-abdominal pressure. Two 10mm trocars and two 5mm trocars are placed in a diamond configuration. Under laparoscopic view with a 10mm zero degree laparoscope, the vaginal vault is easily identified by pushing its apex with a grasper from outside. The bowel is easily retracted due to Trendelenburg position and the promontory is identified; the peritoneum on the promontory is incised for optimal exposure and to guarantee easy passage of the needle through the cartilage, which assures good fixation of the mesh. During this maneuver, special care must be taken in order to not injury the sacral artery that may cause significant bleeding. Next, the intervesico-vaginal space is dissected for vaginal wall exposure. A polypropylene mesh is inserted into the abdominal cavity through the 10mm trocar. The mesh is fixed to the vaginal wall first with 3 prolene-1 stitches. We always perform cystoscopy after this step in order to rule out bladder injury. Then, the mesh is pulled up to the promontory under both laparoscopic and vaginal guidance in order to confirm excellent vaginal vault suspension. After that, 3 stitches are placed in the promontory cartilage and thus, fixing the mesh to it. At the end of the procedure the peritoneum incisions are closed with a running suture using an absorbable thread; care must be taken to not pull the ureters medially. The surgery is completed with minimal blood loss and no drainage is necessary. The wounds are closed. The patient is encouraged to start diet after 6 to 12 hours of the completion of the procedure. Usually the patient is discharged in the second day.

Vaginal vault prolapse can be a difficult problem to treat. Successful treatment requires good knowledge of the anatomy and treatment options. Laparoscopic sacral colpopexy is a feasible and safe alternative to transabdominal open correction of the vaginal vault prolapse that offers similar efficacy with the benefits of a minimally invasive procedure.

1. Laparoscopic sacral colpopexy approach for genito-urinary prolapse: experience with 363 cases. *Eur Urol.* 2005 Feb;47(2):230-6.