

INTRAVAGINAL MESH REPAIR OF APICAL AND ANTERIOR VAGINAL PROLAPSE USING THE “CAPIO” SYSTEM

Synopsis of Video

To accomplish a bilateral sacrospinous suspension with minimal tissue dissection and to provide durable support of the bladder using a synthetic polypropylene mesh, avoiding the external passage of needles through the skin and ensuring continuity between the anterior vaginal compartment and the apex.

Hypothesis / aims of study

The rationale is to perform an intra-vaginal repair of recurrent vaginal prolapse anchoring the vaginal cuff to the sacrospinous ligaments with minimal tissue dissection and to provide durable support of the anterior vaginal compartment by fixing a 15 x 15 cm macroporous polypropylene mesh to the arcus tendineus fasciae pelvis using the Capiro system as sutures carrier for both procedures. This technique avoids passage of needles through the skin and obturator membrane minimizing the risk of any blind passage of the needle and provides support to the bladder covering the entire distance between the pelvic side walls.

Study design, materials and methods

After injection of saline solution, an incision of the posterior vaginal wall is carried on starting 2 cm below the vaginal apex and ending at the level of the hymenal ring.

A blunt dissection of the pararectal space is performed on the right side of the patient and the sacrospinous ligament identified and palpated. With the Capiro system a n° 0 prolene suture is passed through the ligament.

On the left side, the anatomical dissection of the pararectal space is shown and the sacrospinous ligament easily visualized.

Again the ligament is transfixated with n° 0 prolene suture using the Capiro carrier.

Following the placement of sutures on both sides, the anterior vaginal wall is then opened and the bladder dissected away from the vagina. The paravesical space is entered and the descending pubic arch is palpated.

Using the Capiro system three n° 0 prolene sutures are placed on both sides of the pelvis: the first through the sacrospinous ligament just medially to the ischial spine, the second in the mid part of the arcus tendineus fasciae pelvis and the third distally at the level of the pubic bone.

A 15 x 15 cm macroporous polypropylene mesh is then anchored to the sutures and tied on both pelvic side walls. The 15 cm width of the mesh is required proximally to cover entirely the distance between ischial spines, ensuring support, and to re-establish continuity between the anterior compartment and the vaginal apex.

Prolene sutures on the sacrospinous ligaments are then anchored to the vaginal apex and tied before closure of the posterior wall is entirely accomplished.

Results

To date few patients have been operated on using the technique described above and preliminary results in the short run are encouraging. The technique has several advantages when compared with the commercially available kits for prolapse repair. There is no blind passage of the needles through the lateral pelvic walls. The mesh is of reasonable size to cover the anatomical distance between ischial spines and the arcus tendineus fasciae pelvis on each side of the pelvis without leaving any lateral defect uncovered. Anchoring the mesh proximally to the sacrospinous ligaments the anatomical continuity between anterior vaginal compartment and the apex is ensured providing a durable support to the pelvic organs.

Interpretation of results

The technique is as easy to perform as those advocating the use of available kits for prolapse repair and we believe is particularly indicated for the repair of recurrent vaginal prolapse.

Concluding message

This is a feasible technique for the repair of recurrent vaginal prolapse.

Specify source of funding or grant	No grant of funding
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	We performed the procedure routinely for pelvic reconstruction
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes