

## SINGLE INCISION LOW WEIGHT MONOPROSTHESIS FOR ANTERIOR AND APICAL VAGINAL PROLAPSES

### Introduction

A new option for single incision repair of concomitant anterior vaginal prolapse, associated or not with apical defect was developed. It consists of an implant made of a low weight monofilament polypropylene macroporous type I mesh combining high flexibility with a little amount of implanted synthetic material. The part of the implant which is placed at the level of the bladder neck, is held between two self-anchoring polypropylene arms with a multi point fixation design, especially developed to be anchored at the internal obturator muscle bilaterally. The set also includes a disposable retractable insertion guide to approach the sacrospinous ligaments bilaterally. The insertion guide has a retractable tip, for the delivery of an innovative tissue anchoring system, composed of a polypropylene arrowhead anchor and polypropylene stitches. This innovative anchoring system has a safety stop to prevent from inserting it too deep through the sacrospinous ligament avoiding lesions to structures such as pudendal artery and nerve. This video highlights the technical details of the procedure.

### Design

The procedure is performed with the patient in lithotomy position. Anterior vaginal wall incision is made from the bladder neck towards the uterine cervix or vaginal vault scar. Blunt dissection is performed towards the ischial spine and coccigeous muscle, identifying the ischial spines and next the sacrospinous ligaments. Stitches are placed at the remanent of cardinal ligament or at the pericervical ring in order to be sutured to the prosthesis, to avoid high cystocele recurrence. Then, the primed retractable insertion guide is introduced toward the ischial spine and is anchored at that sacrospinous ligament, 1.5 cm medial from the ischial spine. Same maneuver is performed at the other side. For insertion of the implant, first, the retractable insertion guide is connected to the multipoint fixation arm and is introduced towards the internal obturator muscle. When the center of the implant is slightly underneath the flap of the vaginal incision, the trigger at the handle is retracted to release in place the fixation arm. The same maneuvers were repeated on the other side. Then, the polypropylene stitches are attached to the arms of the implant bilaterally and it is adjusted in order to correct the anterior defect completely. Stitches, which were placed at the remanent of cardinal ligament or pericervical ring, were fixed to at the posterior body of the implant in order to avoid high cystocele recurrence. The mesh should be underneath the prolapsed bladder in a tension-free manner and the redundant part can be trimmed off. The vaginal incision is closed in the usual manner. Trimming the vaginal wall is not performed unless necessary.

### Results

Ninety-five women underwent the implant of the same prosthesis presented in this video, but made of a heavier mesh (60 g/m<sup>2</sup>). The mesh presented in this video (17g/m<sup>2</sup>) was used in three patients, which not have enough follow up time for a proper evaluation (less than 3 months). Among those in which the heavier mesh was used, there were no significant intraoperative or immediate postoperative complications. According to the last follow-up (89 patients, 12 months postoperative), 84.3% presented POP-Q (1) Ba point less than -1 and 95.5% presented POP-Q (1) C point less than -1. Seven mild mesh exposures were found, one resolved with topical estrogen and 6 cases with exposed mesh excision and vaginal suture.

### Conclusion

This implant introduces the advantages of simultaneous treatment for anterior vaginal and apical prolapses by a single incision transvaginal approach building safety and a fully level I correction of anterior vaginal defects. The multipoint fixation arms plus low weight mesh and the tissue anchoring system represent a real evolution for pelvic prolapse surgery.

### References

1. Bump RC, Mattiasson A, Bø K, Brubaker LP, DeLancey JO, Klarskov P, Shull BL, Smith AR. The standardization of terminology of female pelvic organ prolapse and pelvic floor dysfunction. Am J Obstet Gynecol. 1996 Jul;175(1):10-7.

### Disclosures

**Funding:** Promedon - Argentina: prosthesis donation **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Ethics Committee of the University of Campinas School of Medicine **Helsinki:** Yes **Informed Consent:** Yes