PRELIMINARY RESULTS ON THE USE OF SINGLE INCISION MONOPROSTHESIS FOR CONCOMITANT MANAGEMENT OF APICAL, ANTERIOR PROLAPSES AND STRESS URINARY INCONTINENCE

Author(s):
T. M. BARREIRO, P. C. PALMA, C. L. RICCETTO, V. M. HERRMANN, J. C. SALGADO; State Univ. of Campinas, Campinas - SP, Brazil.

OBJECTIVE
The primary purpose of this study is the assessment of stress urinary incontinence and pelvic organ prolapses healing after new technique of mesh fixation in single incision surgery

BACKGROUND
A new monoprosthesis for concomitant correction of anterior and apical prolapses and stress urinary incontinence was developed (Calistar A). It consists of an implant made of a type I polypropylene mesh with 6 millimeters diameter orifices to facilitate tissue integration and also provide flexibility.
The suburethral part of the implant 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, in order to be placed underneath the midurethra. The kit also includes a disposable retractable insertion guide to approach the sacrospinous ligaments bilaterally, which represent the other anatomical landmarks of the procedure.
This mesh was developed for the treatment of a patient with anterior and apical prolapses stage 3 according to the POP-Q system.
The procedure is performed with the patient in lithotomy position. After doing a hydrodissection, anterior vaginal wall incision is made from midurethra towards the uterine cervix and the pubocervical fascia is carefully dissected. Blunt dissection is performed towards the ischial spine, and coccygeous muscle, identifying the ischial spines and the sacrospinous ligaments.
Then the retractable insertion guide is primed with the tissue anchoring system and is introduced into the sacrospinous ligament 1.5 cm medial from the ischial spine. The tissue anchoring system is released and the insertion guide is gently retracted. The same maneuvers are repeated on 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, one centimeter above the vaginal fornix, guided by surgeon's index finger. When the
centering mark of the implant is at the midurethra at a properly position, the trigger at the handle is retracted to release in place the fixation arm. The multipoint fixation arms design provides strong and stable primary fixation. Cystoscopy is not mandatory. Then, the polypropylene stitches are attached to the arms of the implant bilaterally. Stitches are placed at the posterior body of the implant and fixed at the remanents of cardinal ligaments or pericervical ring in order to avoid high cystocele reccurence. Finally, the vaginal incision is closed in the usual manner.

METHODS
The study subjects were followed 7 days, 1, 3, 6 and 12 months after surgery as outpatients by clinical examination, POP-Q system, and ICIQ short form questionnaire.

RESULTS
This procedure was performed at Unicamp in 14 patients (mean age 58 years-old) with POP-Q stage 3 anterior prolapse. Eight of them also presented stage 2 apical prolapse. Seven of them had concomitant stress urinary incontinence (mean ICIQ-SF score: 15±3), and four had had recurrence after previous anterior prolapse repair. Mean operative time was 45 min. No intraoperative complications or post-operative significant adverse events were observed. None presented post-operative vaginal mesh exposure, infection or visceral erosion. Eight patients performed follow up was 6 months. All of them were considered prolapse (POP-Q stage 0 or 1) and SUI cured (ICIQ-SF score: 0) and one patient developed overactive bladder symptoms. Only one patient had mesh exposure being treated before 3 months follow up. Five patients have performed 12 months of follow up was manteined prolapse and SUI cure.

CONCLUSION
This implant introduces the advantages of simultaneous treatment of apical, anterior vaginal prolapses and stress urinary incontinence by a single incision transvaginal approach building safety and a fully level I correction.

REFERENCES
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