

CONCOMITANT ANTERIOR AND APICAL VAGINAL PROLAPSE ASSOCIATED OR NOT WITH STRESS URINARY INCONTINENCE: A SINGLE ANTERIOR SIX ARMS PROLENE MESH.

Hypothesis / aims of study

Surgery using mesh has better results in correcting high grades anterior and apical vaginal prolapses^(1,2). There is a high incidence of concomitant apical and anterior prolapses stage III and IV. When apical prolapse is predominant, its correction alone leads to anterior recurrence up to 40%⁽³⁾. Therefore correction of these two defects is required for a successful treatment. Pre molded meshes to treat the anterior defect do not correct the apical one, needing the posterior mesh, but the posterior prolapses goes well with the conventional approach. There is a pre molded graft for concomitant anterior, apical and posterior defects, however, it is just the fusion of the anterior and posterior shapes, still needing two vaginal incisions, most surgeons divide it in two pieces, with no surgical advantages. We propose a new mesh shape to correct both anterior and apical prolapses, associated or not with stress urinary incontinence (SUI), with a single anterior vaginal incision.

Study design, materials and methods

We describe ten patients with antero apical vaginal prolapses. They had no previous surgery, so they had the uterus. They had at least stage III prolapse and three of them with SUI. All patients were submitted to pelvic organ prolapse quantification (POP-Q) and urodynamics. Surgical description: midline incision in the anterior vaginal wall until one inch from the uterine cervix. Sub fascial mucosal dissection until arcus tendineus bilaterally, pericervical ring proximally and middle urethra distally. Positioning, with aid of needles, of two pre pubic arms providing sub urethral support and avoiding mesh migration proximally, two transobturator arms as close as possible to the ischial spine and two arms through the sacrospinous ligament, rounding anteriorly the uterine cervix, to treat apical support defect. Fixation of the proximal end of the mesh to the pericervical ring. Suture of the vaginal mucosae. (figure 1 and 2)

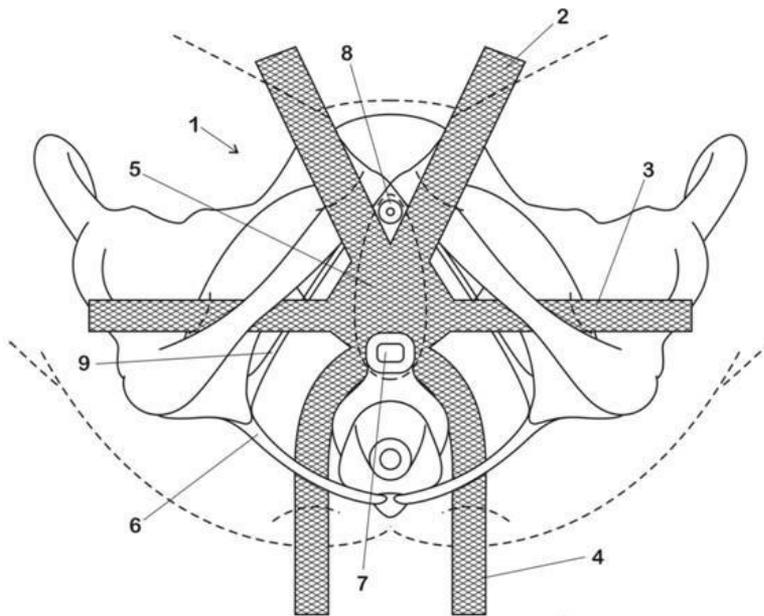


Figure 1) Antero apical mesh configuration: 1) the mesh, 2) pre pubic arms, 3) transobturator arms, 4) sacrospinous ligament arms, 5) body of the mesh, 6) sacrospinous ligament, 7) uterus cervix or vaginal vault, 8) urethra, 9) arcus tendineus.



Figure 2) Molded antero apical mesh.

Results

Mean age was 72 years. All ten patients went home in the first post operative day. There was one case of urinary retention who needed reoperation for relaxation of the pre pubic arms after a week, she regained normal voiding. At a mean follow up of six months (3 to 10 months), all patients were continent, mean preoperative Ba point came from +4cm to -2cm, mean C point from +3 cm to -6 cm and mean Bp point from 0 to -2 cm. All the patients were considered success objective and subjectively. The only sexual active patient had no dyspareunia. There was no mesh erosion or extrusion so far.

Interpretation of results

The anterior vaginal approach to the sacrospinous ligament is not a new technique, but it's association to mesh molded to treat concomitantly apical and anterior vaginal prolapses, with or without stress incontinence, to our knowledge, has not been described. Today, the meshes kits that treat apical defect are combined with posterior prolapse treatment, witch is unnecessary since the later goes well with conventional approach. On the other hand, stages III and IV anterior prolapses are rarely isolated and generally associated with apical defect. Therefore "antero-apical mesh" seems rational and should reduce surgery time, morbidity, relapses and cost.

Concluding message

The prolene mesh with six arms (antero apical mesh) allows a concomitant correction of anterior and apical prolapses, associated or not with SUI, through a single anterior vaginal incision.

References

1. Hiltunen R, Nieminen K, Takala T, Heiskanen E, Merikari M, Niemi K, Heinonen PK. Low-weight polypropylene mesh for anterior vaginal wall prolapse: a randomized controlled trial. *Obstet Gynecol.* 2007 Aug;110(2 Pt 2):455-62.
2. Jeon MJ, Jung HJ, Choi HJ, Kim SK, Bai SW. Is hysterectomy or the use of graft necessary for the reconstructive surgery for uterine prolapse? *Int Urogynecol J Pelvic Floor Dysfunct.* 2008 Mar;19(3):351-5.
3. Dietz V, Schraffordt Koops SE, van der Vaart CH. Vaginal surgery for uterine descent; which options do we have? A review of the literature. *Int Urogynecol J Pelvic Floor Dysfunct.* 2009 Mar;20(3):349-56.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Santa Casa de São Paulo Medical School Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes