1138

Luznik M[1]
1. *General Hospital Slovenj Gradec*

DIFFERENT PELVIC ORGAN PROLAPSE (POP) AS INDICATION FOR ANTERIOR TRANSOBTURATOR MESH (ATOM), POSTERIOR ISCHIORECTAL MESH (PIRM) OR POSTERIOR ISCHIORECTAL TRANSOBTURATOR MESH (PIRTOM): DESIGN OF MESHES

Different pelvic organ prolapse (POP) as indication for anterior transobturator mesh (ATOM), posterior ischiorectal mesh (PIRM) or posterior ischiorectal transobturator mesh (PIRTOM): design of meshes

Background: Use of alloplastic mesh implants allow a new urogynecologycal surgical techniques achieve a marked improvement in pelvic organ static and pelvic floor function with minimally invasive needle transvaginal intervention like an anterior transobturator mesh (ATOM), a posterior ischiorectal mesh (PIRM) or posterior ischiorectal transobturator mesh (PIRTOM) procedures for correction of different pelvic organ prolapse (POP) and pelvic dysfunctions.

Methods: In three years, between April 2006 and January 2010, two hundred and twenty-one operative corrections of female pelvic organ prolapse (POP) and pelvic floor dysfunction (PFD) with mesh implants have been performed by the same surgeon (Tab.1). All patients had preoperative and postoperative physical examination with POP-Q evaluation. In all 221 cases the preoperative vaginal status was assessed as stage II, III or IV by the POP-Q system. The one hundred and one patients with surgical procedure TVT-O or Monarc as solo intervention indicated by stress urinary incontinence without POP are not included in this number. In 97, 5 % of mesh operations, Gynemesh 10 cm x 15 cm was used. For correction of anterior vaginal prolapse (frequently associated to uterine prolapse) with ATOM procedure, Gynemesh was individually trimmed in mesh with 6 free arms for tension-free trans-obturator application and tension-free apical collar (Fig.1). IVS (Intravaginal sling) 04 Tunneller (Tyco) needle system (Fig.1) was used for trans-obturator application of 6 arms through 4 dermal incisions (2 on right and 2 on left). Minimal anterior median colpotomy was made in two separate parts. For correction of posterior vaginal prolapse with PIRM procedure Gynemesh was trimmed in mesh with 4 free arms and tension-free collar (Fig.2). Two ishiorectal long arms for tension-free application through ishiorectal fossa (right and left) via an infraligamental and not transligamental (sacrospinous ligament) way, and two short arms for perineal body also on both sides. IVS 02 Tunneller (Tyco) needle system (Fig.2) was used for tension-free application of 4 arms through 4 dermal incisions (2 on right and 2 on left) in PIRM. For correction of posterior vaginal prolapse associated to uterine prolapse (and enterocele or apical vaginal vault prolapse) with PIRTOM procedure Gynemesh was trimmed in mesh with 6 free arms (Fig.3). IVS 04 Tunneller (Tyco) needle system was used for trans-obturator application of 2 apical arms through 2 dermal perivulvar incisions (one right and left). Two ishiorectal long arms for tension-free application through ishiorectal fossa – right and left via an infra- and not trans-ligamental (sacrospinous ligament) route, and two short arms for perineal body also on both sides. IVS 02 Tunneller (Tyco) needle system was used for tension-free application of 4 arms through 4 dermal incisions (2 on right and 2 on left). So we have all together 6 dermal incisions in PIRTOM.

Results: All 221 procedures were performed relatively safely. In 10 cases of ATOM we had perforation of bladder, in 5 by application of anterior needle, in 3 by application of posterior needle, in one case by blunt dissection and in one case with pincette when collar was inserted in lateral vesico – vaginal space. In 2 cases of PIRM we had perforation of rectum. In all 12 cases correction was performed during the operation, mesh was kept in place and postoperative course of treatment went without complications. Mean hospitalization time for mesh operation was 4 to 5 days. Short term results, 2 to 3 months after the operation, are very good both for pelvic organ static, and for pelvic function. In all 221 cases the postoperative vaginal status was assessed as stage 0 by POP-Q. In 16 cases we had small vaginal erosion in place of upper vaginal incision by ATOM. All erosions were cured spontaneously after removing of unresorptive suture (Etibond 1/0; Ethicon) and/or excision of small denudated mesh part (< 1 mm^2) without any anesthesia and vaginal sutures.

Conclusions: New methods and materials allow return of pelvic floor integrity to physiological condition without hysterectomy of otherwise healthy uterus also in state of totally uterine prolapse. For younger women it is often very important to preserve uterus and normal volume of vagina. Corrections of POP with mesh procedures and without hysterectomy present a minimally invasive surgery with short hospitalization and reconvalescence. Quality of life markedly improved after operation because the preoperative problems were eliminated. Our and foreign experiences on these field with mesh implants give us a promise for long duration of good results which we also expect for women after needle implanted mesh in ATOM and PIRM or PIRTOM procedure.

Table 1: The number of different types of procedures performed for pelvic organ prolapse correction

	Correction of vaginal cuff prolapse	**Correction of POP without histerectomy**	**Correction of POP with histerectomy**	**Together**
ATOM	12	146	14	172
PIRM/PIRTOM	14	10	1	25
ATOM+PIRM	5	14	5	24
Together	31	170	20	221

Figure 1: Gynemesh 10 cm x 15 cm trimmed for ATOM and IVS 04 Tunneller (Tyco) needle system

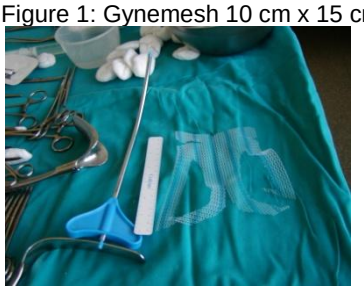

Figure 2: Gynemesh 10 cm x 15 cm trimmed for PIRM and IVS 02 Tunneller (Tyco) needle system

Figure 3: Gynemesh 10 cm x 15 cm trimmed for PIRTOM and IVS 02 and IVS 04 Tunneller (Tyco) needle system

Specify source of funding or grant	**none**
Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**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	**it is still in the process**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**