

AVERTING, MANAGEMENT MESH COMPLICATIONS AT YOUNG WOMEN WITH HIGH RELAPSE RISK OF PELVIC ORGANS PROLAPSE.

Hypothesis / aims of study: is finding ways to improve pelvic organs prolapse (POP) surgery using mesh technology in order to reduce complications at young women.

About 20 percent of Russian women suffer from pelvic organ prolapse. The fact is that most of the patients are women of reproductive age. Every 8th woman of reproductive age in the world has POP. Nowadays using mesh-surgery is a well established effective way for POP surgical treatment. Using mesh in young women is one of the most controversial questions. Unfortunately there is a number of complications connected with using transvaginal mesh procedures (TVM) which often make life miserable for both: patients and surgeons.

Traditional techniques are not highly effective and have a high rate of recurrence.

We think that inefficacy of such operations is not only connected with the techniques themselves but with the connective tissue dysplasia (CTD) which can be observed in half of women suffering from genital prolapse.

On the one hand ideally the first surgery should be the best and the only one.

But on the other hand it shouldn't lead to dyspareunia, which both surgeons and patients fear.

Study design, materials and methods.

In prospective research 85 parous women II-IV stages on POP-Q, operated with 2006 for 2010.

Two groups division criterion was in CTD signs presence. In group A – 46 women without CTD signs, in group B – 39 women with CTD various severity level signs. A universal technique of surgical treatment and CTD group separation allowed to study efficiency of mesh surgery at high relapse risk group.

Surgical correction based on the pathogenetic extraperitoneal neofasciogenesis concept in damaged fascia replacement with new by synthetic mesh making reliable skeleton of pelvic floor. We used polypropylene mesh system by vaginal route in 3 variants: 78,5 % - total pelvic floor repair system, 13,8 % - anterior, 7,7 % - posterior. We followed patients at 6-12-18-48 months postoperative.

Fascia pelvis state, defects type and arcus tendineus fascia pelvis (ATFP) expressiveness degree were estimated intraoperative. We followed patients at 6-12-18-30 months postoperative. Treatment efficiency defined in complains dynamics, POP-Q estimation, ultrasound visualization, magnetic image and rectal inspection. As relapses considered clinically revealed POP II stage and more.

Some operations were combined with vaginal route uterine extirpation, cervix radiowave conization, Sturmdorf cervix amputation, the Manchester operation, sacrospinal fixation, McCall culdoplasty, tension-free urethropexy and sterilization. To 10,8% were simultaneous operations: 7,7% - laparoscopic cholecystectomy, hernioplasty, phlebectomy and vaginal hysterectomy added with vaginal appendectomy. 2 patients simultaneous operated with Longo's stapled transanal resection because of hemorrhoids III-IV degree and obstructive defecation syndrome.

Results. It has not been noted authentic difference in two groups POP severity. In both groups more, than 50% of women marked POP III stage. POP IV stage prevailed in group B.

Genetic analysis have shown PL-A2 GPIIIa prevalence in both groups above population (14%). In early manifestation (before 40) group PI-A2 was found out in 33,3 %. It's proved PI-A2 association with worst adhesive cells properties and increased POP risk.

Connective tissue dysplasia women had early POP manifestation (37%) vs. other group (46%). Group B had shorter disease duration period and combined and complicated POP forms.

Fascia pelvis defects found out in group B in 86,7 % vs. 60% in group A ($p < 0,05$). ATFP was absent or thin in 33,4% , 4 times more often at group B. ATFP expressiveness pelvic fascia defects severity directly depended on CTD severity level.

Thus, pelvic floor structures changes reveal decreased efficiency of POP surgical correction with own tissues and define necessity of pathogenetic treatment with prosthetic materials. In particular it is important for CTD women in reproductive age with "aggressive" and combined POP forms.

Average follow time $2.3 \pm 0,5$ year.

Intraoperative complications were follows: bladder injury - 1,5 %, blood loss about 500 ml - 20 %, without haemotransfusion need. The early postoperative complications including "hanging down" foot syndrome, frontmedial hip skin sensitivity changes, 5 cm Retzii space hematoma - 9,2 %. But all early complications were reversible. Vaginal erosion – 4,2%; mesh shrinking – 4,2%. The frequency of sexual dysfunction was 2,5 %, dyspareunia de novo – 4,2%. On the contrary, the quantity of sexual life dysfunction decreased to 8 % because of pelvic floor restoration.

Interpretation of results.

Our experience has shown that pelvic floor structures changes reveal decreased efficiency of POP surgical correction with own tissues and define necessity of pathogenetic treatment with prosthetic materials. In particular it is actual for CTD women in reproductive age with "aggressive" and combined POP forms. Absence of authentic difference in POP relapses between women groups A, B is scientific acknowledgement of given technique efficiency in POP correction in particular at CTD patients.

On balance the ways to prevent vaginal wall erosion are proper surgery technique, ideal mesh, preservation of the uterus, adequate size and shape of the mesh, straitening of the mesh and complete gemostasies.

For efficient support of anterior wall it's necessary to perform apical attachment. To do this we use the method, which we call toplifting.

When some surgeons oppose using mesh in young women the first thing they consider is high risk of postoperative dyspareunia.

We are also conscience of such complications and suggest the following method which in our opinion helps to prevent it: utilizing small vaginal incisions and the trimming of vaginal mucosa, preserving the cervix, ensuring optimal apical attachment and optimizing vaginal length. Cutting the edge of the implant as though it will remind a swallow's tail.

And tunneling of vaginal wall with which avoid incision of the virginal wall and as a result we have a relatively low dyspareunia rate.

Concluding message.

At reproductive age it's necessary to estimate relapses risk factors as CTD signs, at which presence own tissues usage in pelvic floor surgery is not reasonably.

The extraperitoneal neofasciogenesis with mesh is pathogenetic well-founded method of POP surgery.

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<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	Yes
<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>	Local Ethic Committee of Peoples' Friendship University of Russia
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes