

## NEW MESH AGAINST COMPLICATIONS

Hypothesis / aims of study: frequent complications of vaginal pelvic organ prolapse (POP) mesh-surgery are vaginal mucous erosions and mesh protrusions, adjacent organs injuries and bleeding, vagina shortening and dyspareunia, POP relapses. As complications reasons operative technique infringements, inadequately mesh size and form resulting in shrinking, unsatisfactory implant quality in porosity, inertness characteristics results in prolonged healing formation.

Study design, materials and methods: for an improvement of POP surgery results we modified classic TVM technology with additional fixing points in all mesh parts.

In new concept we offered synthetic implant Pelvix EVO by Lintex® in anterior, posterior and total variants. Mesh material is Polyvinylidene Fluoride (PVDF). Total TVM in original form found by non-absorbable mesh block with laser processed edges for the purpose of falls prevention.

In total variant it has eight arms – 4 in anterior and 4 in posterior part. Method essence in three-level vagina support and tension free strong pelvic organs fixation by mesh skeleton. Implant arms with introducers lead through reliable support points (anterior – AFTP symmetrically, posterior - sacrospinal ligaments). Non-absorbable thread passes through proximal and distal anterior arms symmetrically. That one and subcutaneous anterior arms sewing allows to straighten and strengthen implant completely. For posterior part strengthening and distal shrinking prevention posterior distal arms lead for puborectalis muscle on perineum above anus symmetrically. At hysterectomy, before mesh installation on rectum it leads in tunnel under vaginal mucous "isthmus". For vagina vault fixation, mesh smooth out and vaginal shortening prevention the mesh isthmus fixed additionally and tightened in sacral direction with non-absorbable thread leads through sacrouterine ligament, mesh isthmus and vaginal mucous isthmus without it piercing.

In last data considering anterior and apical compartment prolapse degrees are strong correlated [A.Summers, L.A.Winkel et al], that proved in our search. So anterior mesh contains 6 arms. Posterior passing through sacrospinale ligaments in addition apical department fixation.

Results: with this method we operated 138 women. Follow-up in 2 years and 9 months one asymptomatic anterior relapse (I stage POP-Q) in Pelvix EVO total group, no erosions, incomplete healing.

Interpretation of results: additional support points allow to use light mesh that statistically proved reduces complications rate in erosions, incomplete healing, dyspareunia.

Concluding message: described technique allows to carry out pathogenetic POP correction approach with as much as possible thin and physiologic implants.

<b>Specify source of funding or grant</b>	<b>none</b>
<b>Is this a clinical trial?</b>	<b>Yes</b>
<b>Is this study registered in a public clinical trials registry?</b>	<b>No</b>
<b>Is this a Randomised Controlled Trial (RCT)?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>Local People's friendship university Ethics Committee</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>