ing to the periosteum of sacrum. First, it is necessary to make sutures on the periosteum, then to follow them through the fascia, 3-4 sutures must be made. Distal end of stripe is sewed to the apex of vagina, 3 separate synthetic nonabsorbtional sutures are made on the anterior wall of the vagina. The stripe of fixing material is laying on the vagina cupola and can be sewed to it, if it is necessary. Douglas space is closed by sewing of sacrum uteri ligament along medium line.

5. Parietal peritoneum is sewed above the stripe of the fixing material, small pelvis is peritonized.

Sacral vaginopexy with prolene net application

was made in 8 cases. There were no recurrences during 5 years.

Conclusions. Sacral vaginopexy with prolene net application has many advantages in comparison with the other methods of genitalia prolapsus cure where only proper tissues are used. GyneMech series prolene stripe application when sacral vaginopexy takes place, makes possible to save the depth of vagina and to recover normal axis of vagina cupola. As sacral vaginopexy is followed by pelvis hernia closure, the prolene net usage for the anatomic correction is justified. This material is well modeling, demonstrates itself as unresolving and unreactive and easy in application.

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# THE EXPERIENCE OF SURGICAL TREATMENT OF STRESSFUL URINARY INCONTINENCE OF AN AVERAGE AND HEAVY DEGREE

**Problem:** what is the effect of "sling" operations for patients with urinary incontonence.

**Methods.** Before surgical treatment of urinary incontonence we spend the certain algorithm of diagnostics: use of the modified questionnaire; carrying out of functional tests, bacteriological analises of urine, urodynamical researches, cystoscopy, urethrography.

We give the special value to carrying out of the stoptest, rectal-test in Savitskiy's updaiting, the Mazurek's test. In our opinion the group of patients with average and heavy degree of urinary incontonence should have the special attention. We performed 86 operations (with vaginal and laparoscopy acssess and sling-operations).

Results. Having tracked the remote results of vaginal operations and having analysed same cases of combined surgical operations at these patients (with vaginal and laparoscopy acssess) there has been drawn a conclusion about their rather low efficiency.

For last years we executed 52 "sling"-operations (of Gebbel-Shtekel and Oldridzh-Krasnopolskiy) at average and heavy degrees of urinary incontonence.

The age of patiens was from 34 till 52 years, duration of their disease varied from 2 till 7 years. On the basis of the direct and remote results the restoration of normal urination process was noted in 44 cases from 52. After "sling"-operations there was noted a long period of treatment caused by long restoration of urination process.

**Conclusions.** It is drawn a conclusion that the given sling-operations are the most effective in patients with an average and heavy degree urinary incontonence.

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### BIOMECHANICS AND BIOCOMPATIBILITY OF SYNTHETIC SUBURETHRAL SLINGS

**Aim of study:** The aim of our work was to find the correlation between biomechanical properties of synthetic suburethral slings and tissue reaction after implantation of them.

Material and methods. For our research we took five kinds of polypropylene synthetic slings with different structure – TVT (Gynecare), Obtape (Mentor) and three types of synthetic implants, which were created in scientific department of Lintex Ltd (specimen №1, №2 and №3). All implants could be divided into two groups: woven (TVT, specimen №1, №2 and №3) and non-woven (Obtape). Detailed structural and mechanical analysis of implants was undertaken to get information of their thickness, surface density, bulk poros-

ity, breaking load, maximum deformation, elasticity, middle square of cells, diameter of filaments, middle quantity of filaments in cell walls. Tissue reaction after implantation of selected materials was evaluated in rat model. Specimens were implanted into abdominal wall between skin and muscles. The explants were evaluated for: intensity of inflammation, the nature of inflammation, the development of granulations, intensity of fibrosis, vascularisation, minimal and maximal width of scarring zone around the implant.

**Results.** The evaluation of structure of implants allowed us to divide them into three groups: with relatively small cells and thin walls of cells (specimen N1), with intermediate characteristics (TVT) and with big-

ger cells and thick walls (specimens №2 and №3). TVT had the biggest material capacity (94 g/m2) and highest breaking load (80 N), but as well it had extremely instable structure during tension (peak load deformation about 178%). Specimen № 1 had the smallest material capacity (56 g/m2), it had a little bit lower breaking load (57 N), but its structure was very stable during tension (peak load deformation not more then 30%). Specimen №2, №3 and Obtape had intermediate characteristics. Pathologic research showed similar inflammatory response when using of all selected polypropylene implants. However, when using Obtape, in three cases

(9%) we observed abscesses in the site of implantation. Considerable difference was in width of scarring zone and intensiveness of fibrosis surrounding the implant. Thin, delicate and equal width of scarring zone was when using Obtape and specimen №1. Thick and solid scarring zone was in cases of specimen №2 and №3. In case of TVT there were intermediate characteristics.

**Conclusion.** Our research demonstrated that structural and mechanical properties of synthetic implants have obvious influence on tissue reaction after implantation of them.

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**Design & Methods:** 265 patients were operated using TVT (198 patients) and TVT obt (67 cases) from 2000 to 2005 year. Age of patients is 14 to 79 year (average 49,7). There was 43,9% postmenopausal women. In most cases TVT/TOT and surgical treatment of genital prolapses have done in one time. There were TVT/TOT and colporraphy, VH, Manchester or colpocliesis. There were been 24 complications, when TVT was done: bladder perforations – 5 (2,3%), hematoma – 2 (0,8%), disorders of bladder emptying – 17 (9%). There wasn't complication when TVT obt was performed.

### DIFFERENT TYPES OF TENSION FREE VAGINAL TAPES (TVT, TVT-O) IN TREATMENT OF STRESS INCONTINENCE

Results. Long-term results (4 years) of surgical treatment of SUI by TVT/TVT-obt technology have shown 95,7% excellent and good results and 4,3% of patients have minor symptoms of incontinence (de novo incl.). The negative results were not noted after TVT-obt. All patients are "dry", without any disorders.

Conclusions. Now TVT is considered "gold" standard of surgical treatment of SUI. But transobturatorium way (TVT-obt) has some advantages: no risk of bladder perforation, no postoperative disorders of bladder emptying.

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Material and methods. IVS posterior plastics of rectocele was carried out since 2002 year among 42 patients in the age of 42-69 with recurrence of rectocele. All the patients had vaginal or abdominal hysterectomy with different methods of vaginopexy, colpoperineolevatoroplastics. Recurrence of rectocele developed during the 6-24 months and was accompanied by sexual discomfort, disturbances of defecation.

Method of IVS posterior plastics of rectocele was combined with plastics of defect of the peritonealperineum aponeurosis. We applied prolene Mash in the form of T-shot. The basis of the prosthesis applied to the defect and its loose ends took out on the GYNE MESH SOFT IN SURGICAL TREATMENT OF RECTOCELE

skin of the perianal area behind the m. levator ani, with the assistance of IVS-tunneller.

**Results.** We have the long-term results of the technique (18 mounts). There were no sexual discomfort, disturbances of defecation or recurrence of prolaps. Analysis in 18 patients revealed the reliable differences of sexual status before and after surgical treatment. Thus 13 patients (75%) noted the satisfaction from sexual life. The frequency of sexual intercourse has increased in 10 patients (60%).

**Summary.** In spite of a small number of the patients and a short period of care there were noted the simple technique of this operation without any haemorragic or infection complications and good functional results.