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Qasimzade I. T.

MANAGEMENT OF PATIENTS WITH STRESS URINARY INCONTINENCE USING MODIFIED KHARKOVSK'S METHOD

Azerbaijan Medical University (Baku, Azerbaijan)

nauchnayastatya@yandex.ru

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Introduction. Pelvic organ prolapse (PT) and stress urinary incontinence (SNM) are extremely common pathologies that affect up to 50% of women [1,2]. Not presenting direct threat to the life, these diseases in more than half of the patients, lead to various manifestation of incontinence and in the long-run to social disadaptation and serious emotional problems [3]. In the United States each year more than 200,000 people are executed annually. Operations for SNM and PTO, and the total cost of treatment exceeds \$18 billion [4]. By 2050, the number of patients with these pathologies in the United States is projected to more than double to 37 million [5]. All this makes it possible to talk about the PTO and SNM as a serious socio-economic problem. In solving the problem of SUI, it would seem that the gold standard has been defined – synthetic medium-urethral sling. However, choosing the degree of tension of the implant remains to this day by manipulation of absolutely no standardized, which seriously affects the results of treatment. Despite the fact that the prosthesis is installed, according to most authors, without tension (“tension-free”), the frequency of obstructive urination after sling installation reaches 5.9% (2-33.9%) [6]. Moreover, about 6% (0-21.3%) such patients need repeated operational interventions in connection with obstruction [7]. In case if the prosthesis is not stretched enough the opposite situation will be seen. According to recent research long-term objective effectiveness of the methodology does not exceed 64.4%, and the number of reinterventions for SUI within 5 years reaches 17.7% [6,8]. According to the results of studies, the need to correct the position of tapes was seen in 11.6-60% of cases, which indicates the obvious urgency of the problem.

Aim of the study: to improve efficiency and safety of the treatment of patients with pelvic organ prolapse and stress urinary incontinence by using new techniques of surgical correction.

Object and methods of research. A prospective study conducted on 22 patient's by Modified Kharkovsk's method of SUI and prolapses performed by the same surgeon from January of 2019 till October of 2019 y., at German hospital in Azerbaijan, Baku. Total 22 number of patients were included to the current study. Current study included two groups of patients the first group of patients who undergo retropubic sling surgery without

removing the uterus and the second one is group with total or subtotal removal of the uterus along with retro-pubic sling. 12 patients in the first group, and 10 in the second group. Medical records of the patients identified were reviewed, factors examined included demographic details, preoperative diagnosis, past gynecological surgery, method of anesthesia, length of operation, intra-operative and post-operative complications, length of stay in hospital and findings at post-operative review (at 6-12 weeks after surgery).

Description of the method. The patient is placed in a horizontal position. Under general anesthesia after disinfection, the bladder is emptied via a transurethral Foley catheter. Under sterile conditions the operation was performed from the lower-middle pubic access. From the aponeurosis of the straight abdominal muscles cut a rectangular flap measuring about 10.0 to 1.5 cm, the ends of which were stitched with capron ligatures. The sling flap was fixed to the back of the bladder neck with 4-5 dexon seams in the vicinity of the bladder hole. Then we brought sling ligatures to the aponeurosis. Sling ligatures were fixed on the aponeurosis of the direct abdominal muscles with the help of the Kharkiv antenna system (**fig.**). The Kharkiv antenna is a special tubular system for regulating the postoperative tension of sling ligatures, developed in 2002 by a group of Kharkiv urologists. It consists of two Teflon or polypropylene tubes of different diameters (8 and 10 Ch) and length (depending on the thickness of subcutaneous fat. Installation of this device and the actual regulation are carried out as follows: after the removal of sling ligatures on the aponeurosis, the latter are carried through the light of a tube of a larger diameter with a direct surgical needle. Ligatures are fixed by inserting a smaller-diameter tube into the lumen of a larger diameter tube. Sling was not stretched. The pubic wound was layered. At the same time, the end of the fixing-steering system was excreted over the skin. On 20-21 days after the operation, the urethral catheter was removed. A day later, the degree of urine retention was assessed, as well as the presence of residual urine. When a leak of urine is detected, the ligatures were pulled up, having previously pulled out a smaller tube from the larger lumen. Fixation of the necessary degree of tension was carried out by the introduction of one tube into another. In a urinary retreat situation, the tension of the ligatures weakened in the same way. Regulation was carried out for 2-14 days at intervals of 1-3 days. Removal of the fixing system was carried out by applying a surgical clamp on the ligature below the proximal end of the large tube. This allowed to maintain the necessary degree of tension of the sling. The smaller tube was then removed from the larger

lumen. Sling ligatures finally tied over the aponeurosis, and the clamp was removed.

Further, depending on whether a hysterectomy was performed or not, two techniques of surgery are used, the first is carried out ventral fixation of the uterus with the seizure and tightening of the bladder with the elimination of Douglas space. The second one is after total hysterectomy the cervix stump is fixed with the seizure and tightening of the bladder. 4 different types of techniques are performed depends on the kind of disorders exist.

1) If prolapse is combined with cystocele, anterior colporrhaphy and retropubic sling are performed.

2) If cystocele combined with rectocele, anterior and posterior colporrhaphy and retropubic sling are performed.

3) In cases of varying degrees of uterine prolapse + cysto and rectocele, anterior and posterior colporrhaphy and retropubic sling are performed along with ventrofixation of the uterus with capture of the bottom of the urinary bladder and its posterior and anterior walls with the main emphasis on eliminating the anterior Douglas, as a result the ends of the threads go from the periton and fixed on peritonea.

4) If for any reason a total hysterectomy is performed, it is necessary to fix the stump and bladder over the pubic symphysis.

Statistical analysis using the non-parametric Mann-Whitney test was performed. No significant difference at the 5% level was noted.

The results of the study and their discussion. Up to now, we have applied this technique in 22 cases. The clinical results, also checked by tonometry and sonography, were satisfying. No bladder or urethral perfora-

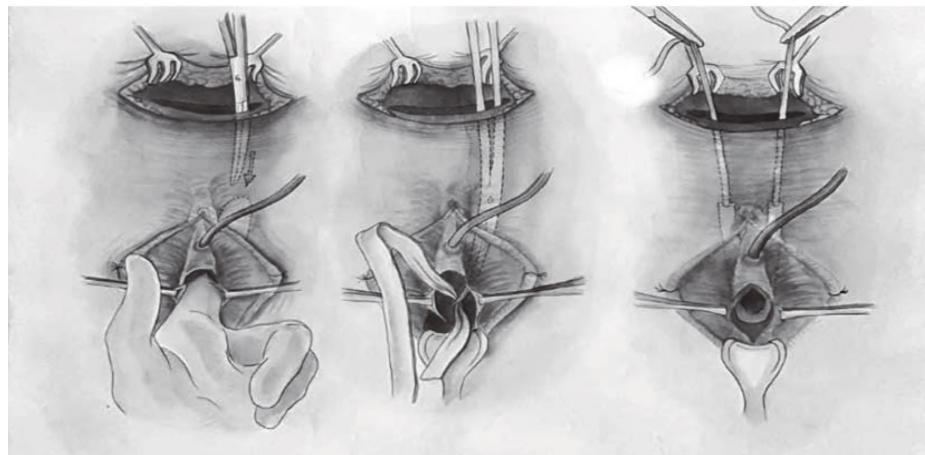


Figure – Technique of placement of the sling.

tions were noted. Post-operatively 22% (5/22) required recatheterisation in the short term of one week following surgery. However only 13% (3/22) and 4.5% (1/22) required readjustment of sling (during one week following surgery).

The median number of day's hospitalization was three for isolated retropubic sling and 5 for colposuspension + retropubic sling. The overall success rate, defined as subjective absence of stress urinary incontinence was 86.3% (19/22) and 95.4% (21/22) respectively for retropubic sling and combined colposuspension + retropubic sling.

The advantages of this method are cheapness, allograft as it is taken from its own aponeurosis and the most important is the possibility of regulation after surgery.

Conclusion. Retropubic sling is a surgical sling procedure for treating SUI in female patients and is accessible to most patients.

Prospects for further research. Further improve of surgical techniques designed is planned to treat stress urinary incontinence in female patients.

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ЛІКУВАННЯ ХВОРИХ ЗІ СТРЕСОВИМ НЕТРИМАННЯМ СЕЧІ З ВИКОРИСТАННЯМ МОДИФІКОВАНОЇ ХАРКІВСЬКОЇ МЕТОДИКИ

Гасимзаде І. Т.

Резюме. Метою даного дослідження є підвищення ефективності і безпеки лікування пацієнтів з пролапсом тазових органів і стресовим нетриманням сечі з використанням нових методів хірургічної корекції.

Об'єкт і методи. Проспективне дослідження, проведене на 22 пацієнтках за модифікованою Харківською методикою СНС і пролапсах, проведене в німецькій лікарні в Баку, Азербайджан, з січня 2019 року по грудень 2019 року.

Результати та обговорення. До сьогоднішнього дня ми застосовували цю техніку в 22 випадках. Клінічні результати, також перевірені за допомогою тонометрії та сонографії, були задовільними. Перфорації сечового міхура і уретри не зазначені. В післяопераційному періоді у 22% (5/22) була потрібна повторна катетеризація протягом короткого терміну – один тиждень після операції, регулювання слінгу потрібно було 13% (3/22) і 4.5% (1/22).

Висновки. Ретробульбарний слінг – це хірургічна процедура, яка призначена для лікування стресового нетримання сечі у пацієнток жіночої статі, доступна більшості пацієнтів.

Ключові слова: ретробульбарний слінг, пролапс, стресове нетримання сечі.

ЛЕЧЕНИЕ БОЛЬНЫХ СО СТРЕССОВЫМ НЕДЕРЖАНИЕМ МОЧИ С ИСПОЛЬЗОВАНИЕМ МОДИФИЦИРОВАННОЙ ХАРЬКОВСКОЙ МЕТОДИКИ

Гасымзаде И. Т.

Резюме. Целью данного исследования является повышение эффективности и безопасности лечения пациентов с пролапсом тазовых органов и стрессовым недержанием мочи с использованием новых методов хирургической коррекции.

Объект и методы. Проспективное исследование, проведенное на 22 пациентках по модифицированной Харьковской методике СНМ и пролапсах, проведенное в немецкой больнице в Баку, Азербайджан, с января 2019 года по декабрь 2019 года.

Результаты и обсуждение. До сегодняшнего дня мы применяли эту технику в 22 случаях. Клинические результаты, также проверенные с помощью тонометрии и сонографии, были удовлетворительными. Перфорации мочевого пузыря и уретры не отмечены. В послеоперационном периоде у 22% (5/22) требовалась повторная катетеризация в течение короткого срока – одна неделя после операции, регулировка слинга потребовалась 13% (3/22) и 4.5% (1/22).

Выводы. Ретробульбарный слинг – это хирургическая процедура предназначенная для лечения стрессового недержания мочи у пациенток женского пола, доступная большинству пациентов.

Ключевые слова: ретробульбарный слинг, пролапс, стрессовое недержание мочи.

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The aim of this study is improvement efficiency and safety of the treatment of patients with pelvic organ prolapse and stress urinary incontinence by using new techniques of surgical correction.

Object and methods. A prospective study conducted on 22 patient's by Modified Kharkovsk's method of SUI and prolapses performed at German hospital in Baku, Azerbaijan, from January of 2019 till December of 2019 y. Total 22 number of patients were included to the current study. Current study included two groups of patients the first group of patients who undergo retropubic sling surgery without removing the uterus and the second one is group with total or subtotal removal of the uterus along with retropubic sling. 12 patients in the first group, and 10 in the second group. Medical records of the patients identified were reviewed, factors examined included demographic details, preoperative diagnosis, past gynecological surgery, method of anesthesia, length of operation, intra-operative and post-operative complications, length of stay in hospital and findings at post-operative review (at 6-12 weeks after surgery).

Results and discussion. Up to now, we have applied this technique in 20 cases. The clinical results, also checked by tonometry and sonography, were satisfying. No bladder or urethral perforations were noted. Post-operatively 22% (5/22) required recatheterisation in the short term of one week following surgery, readjustment was required in 13% (3/22) and 4.5% (1/22).

Retropubic sling is a surgical sling procedure for treating SUI in female patients and is accessible to most patients. The advantages of this method are cheapness, allograft as it is taken from its own aponeurosis and the most important is the possibility of regulation after surgery. Statistical analysis using the non-parametric Mann-Whitney test was performed. No significant difference at the 5% level was noted.

Conclusion. Retropubic sling is a surgical sling procedure for treating SUI in female patients and is accessible to most patients.

Key words: retropubic sling, prolapses, stress urinary incontinence.

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