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STATE OF THE TEACHING ABOUT EPIDEMIOLOGY, ETIOPATHOGENESIS, CLINIC, DIAGNOSIS AND TREATMENT METHODS OF GENITAL PROLAPSE.

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ABSTRACT

The problem of prolapse and prolapse of the internal genital organs remains relevant in operative gynecology, which is determined by the high frequency of this disease among women of fertile age. Almost half of women under 50 years of age suffer from prolapse of the genital organs of varying degrees of severity, almost half of them receive surgical treatment. Recurrence of prolapse of gynecological organs after surgery occurs in 43-56% of operated patients. The development of methods for strengthening the pelvic floor is an urgent problem in gynecology.

Keywords: Prolapse of the genital organs in women, synthetic meshes, ligamentous apparatus of the uterus.

СОСТОЯНИЕ УЧЕНИЯ ОБ ЭПИДЕМИОЛОГИИ, ЭТИОПАТОГЕНЕЗЕ, КЛИНИКИ, ДИАГНОСТИКИ И МЕТОДОВ ЛЕЧЕНИЯ ГЕНИТАЛЬНОГО ПРОЛАПСА

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РЕЗЪЮМЕ

Проблема опущения и выпадения внутренных половых органов остается актуальной в оперативной гинекологии, что опреляется высокой частотой этого заболевания среди женщин фертильного возраста. Почти поло вина женьщин до 50 лет страдают опущением половых органов различной степени выраженности, почти половина из них получают хирургическое лечение. Рецидивы пролапса гинекологических органов после операции встречается у 43-56% оперированных больных. Разработка методов укрепления тазового дна является актуальной проблемой гинекологии.

Ключевые слова: Пролапс половых органов у женщин, синтетические сетки, связочный аппарат матки.

The problem of prolapse and prolapse of internal genitalia remains relevant in operative gynecology, which is due to the high frequency of this disease among women of fertile age. Almost half of women under 50 years of age suffer from genital prolapse of varying degrees of severity [Abrahamyan K.N., 2019; Adamyan L.V., Smolnova T.Y., 2014; Nechiporenko A.N., 2016 , Radzinsky V.E. et al., 2017; Clemons J.L., et al. 2013,2014; Maher C., et al. 2013]. According to Russian authors, from 10 to 20% of patients in gynecologic hospitals are treated for internal genital organs prolapse and prolapse [27,70,73,78,98,121,133]. Despite the improvement in the quality of obstetric care, about 50% of all women who gave birth at term

have genital prolapse of varying degrees of severity, and in women over 50 years of age, this pathology occurs in 57-78% of cases [1,2,19,87,97,123].

Genital prolapse is a general name for abnormalities in the ligamentous apparatus of the vagina and uterus that cause internal genital prolapse or prolapse, e.g. uterine prolapse, uterine prolapse, vaginal prolapse, vaginal prolapse. About 50% of women suffer from genital prolapse. This condition is not life-threatening, but it significantly impairs the quality of life of the patient.

Genital (pelvic) prolapse is a group of diseases of the ligamentous and muscular framework of the pelvic floor, leading to prolapse and then prolapse of the female genital organs [Shkarupa, D.D., 2016; Chechneva M.A., Barto R.A., 2014; Siddiqui N.Y., Grimes C.L., 2015; Petros, P.E., 2013;].

Epidemiology of female genital prolapse

Prolapse of the genital organs in women - the syndrome of the pelvic floor and pelvic organs, individually or together, has a negative impact on the quality of life of women. According to the World Health Organization (WHO), by 2030, about 63 million women in the world will suffer from prolapse of the genital organs, because by this time the number of elderly people will double, and therefore the problem of prolapse of the genital organs will become more urgent [112]. In recent years, an increase in female genital prolapse has been noted in the United States, and accordingly, the number of patients with this pathology is projected to increase from 3.3 million to 4.9 million by 2050, i.e. more than 33% [64]. According to the WHO, 2.9 to 53% of women have some form of penile prolapse [112]. Genital prolapse occurs in 40% of multiparous women in our country. This, in turn, leads to restlessness, sexual dysfunction, development of stress urinary incontinence, constipation and decreased libido. Therefore, this problem can be called not only a medical, but also a social problem.

Up to 47% of patients with pelvic organ prolapse are women of working age [53]. According to the Women, Health Initiative Study, among 16,616 women of perimenopausal age, the detection rate of uterine prolapse was 14.2%, cystocele - 34.3%, rectocele -18.6% [1]. In most cases, pelvic prolapse is almost asymptomatic, which proves its prevalence in the population [2, 3]. However, when symptoms of AJAP are present, 1 in 5 women are at risk of surgery for AJAP or incontinence by age 80 [4,45,67]. Recurrence of pelvic organ prolapse reaches 30-40% (Ishchenko A.I. et al., 2021). A large number of surgical methods are available, but the number of relapses does not decrease (Gonzalez Palanca S.J., 2019). The risk of pelvic prolapse after hysterectomy is of particular importance. The lack of a gold standard for the treatment of post-hysterectomy genital hernia and the very high recurrence rate of the disease prompts the development of new evidence-based solutions. Prevention of genital hernia after hysterectomy is important for the success of the operation. However, despite the variety of preventive surgical methods, the occurrence of this pathology reaches 43% (Krasnopolskaya I.V., 2014). According to the American Urological Association (AUA), surgical treatment of penile prolapse and/or stress incontinence is required in one in nine women in the general population [Olsen, 1997], and various forms of penile prolapse occur in one in every woman over the age of 60. occurs in the fourth woman [Aliyev E.A., 2016]. By age 80, 11% of all women will undergo surgery for penile prolapse or urinary incontinence (Olsen, 1997). British scientists Kirsey M. Rinne et al.

(2009) conducted a massive meta-analysis in women aged 35–73 years.The study included 8,420 women (2000-2009) who underwent surgery and conservative treatment for penile prolapse. They concluded that 35.6% of women had genital prolapse requiring surgical treatment. Depending on the surgical procedure, the effectiveness of surgical treatment is about 81%. The efficiency of using allotransplants was 33.7%. Based on meta-analysis data, they noted that pelvic organ prolapse can be as high as 29.6% in women who engage in heavy physical labor, as well as in women with multiple births (more than 2 births). The epidemiology of AJAP remains unclear. According to different authors, prevalence varies between 30% and 93% [Gavrilov M.V. 2019; Ziganshin A.M., 2017; Kurbanov B. B., 2018; Zenebe C.B. et al., 2021;]. According to 4 studies conducted in certain population groups with the help of questionnaires, 1,071 of 12,514 women were diagnosed with AJAP (Lawrence, 2008; Zhiyuan Dai et al. 2018; Tegerstedt, 2005; Vitale S.G., 2018).

According to Hendix et al., among 16,616 women aged 50 to 79 years, who analyzed the prevalence of AJAP, prolapse was noted in 41% of women, of whom 34.3% had cystocele, 18.6% had rectocele, 14.2% had uterine prolapse, and 10,727 women who underwent hysterectomy. among them, according to Hendrix, 2002, Handa et al., the prevalence of cystocele and rectocele was 32.9% and 18.3%, respectively[2, 23.], among 412 women enrolled in the Women's Health Initiative study, the average annual incidence of anterior vaginal wall prolapse (cystocele) was 9.3, posterior vaginal wall (rectocele) was 5.7, and uterine prolapse was 1.5 per 100 person-years. According to Nygaard et al [2004], among 270 women who did not have a hysterectomy, 25.6% of the uterus descended at or below the level of the hymen. Jonathan March (2008) conducted a Cohort study of penile prolapse in women. The rate of hospitalization for prolapse was 2.04 per 1,000. Age, parity, and body weight were associated with the risk of hospitalization for prolapse, after adjustment for associated baseline factors such as smoking status and obesity at study entry (Kettle index).) and significant trends in prolapse risk were observed. Social class, oral contraceptive use, and height were not significantly associated with prolapse risk. The incidence of prolapse requiring surgical treatment after hysterectomy was 3.6 per 1,000 person-years.The cumulative risk increases from 1% three years after hysterectomy to 5% 15 years after hysterectomy. The risk of prolapse after hysterectomy was 5.5 times higher (95% CI 3.1–9.7). According to the authors, [Krasnopolsky 2017, Kulakov 2000, Popov 2017, Kurbanov B.B. 2018], 15-30% of women experience prolapse and prolapse of the internal genital organs, and the occurrence of prolapse increases to 40% in women over 50 years of age. Among elderly and elderly women, the rate of genital prolapse increases to 50-60% [Popov 2018; Radzinsky 2014] and usually increased to 80% in the postmenopausal period against the background of estrogen deficiency and when accompanied by various urogenital diseases. Taking into account the annual increase in the number of births in our republic, genital prolapse occurs in 45% of women, and in 18% of them, various complications, including quality of life disorders, are detected.

Etiology and pathogenesis of female genital prolapse

One of the most urgent problems of surgical gynecology is internal genital prolapse. Diseases are characterized by frequent occurrence and from 15 to 40% of cases are recorded [Abramyan K. N., 2021; Radzinsky V. E. et al., 2014; Moore, R.D., 2012]. According to the literature, 10 to

20 percent of women in a gynecological hospital are treated for internal genital prolapse [22]. Despite improving the quality of obstetric care, 50% of all women who gave birth on time have genital prolapse of various degrees, and in women over 50 years of age, this pathology occurs in 57-78% of cases [4]. The main reasons for the development of female genital prolapse at the present time are:

1. Congenital deficiency of pelvic floor muscles due to the violation of the connection of the central nervous system with the groin during the development of the brain and spinal cord.
2. Abdominal muscle relaxation due to asthenia, acute fatigue or recurrence of chronic fatigue, especially complicated pregnancy (polyhydramnios, multiple pregnancy, etc.). The downward movement of the uterus is a reflection of the general AJAP of the internal organs.
3. Deep tears of the soft tissue of the vagina are common, especially in childbirth complicated by a narrow pelvis. The use of obstetric forceps during childbirth is considered to be of great importance.
4. Old age and old age (tissue atrophy occurs).
5.Physical exertion (occupational activities involving heavy physical work, especially during puberty, after childbirth and menopause).
6. Sudden loss of body weight (atrophy of pelvic muscles and tendons).
7. Intestinal dysfunction, manifested by frequent and long-term constipation
will be.
8. One of the risk factors is obesity, which increases the pressure on the abdominal and pelvic muscles.
9. Sometimes the cause of uterine prolapse is pelvic tumors [9 ,23].

Often, penile prolapse is caused by a combination of several causes. Early stages of uterine and/or vaginal prolapse may be asymptomatic. A small prolapse of the uterus and vagina can be painless. With uterine prolapse, the menstrual cycle is usually not disturbed. Women may feel the first discomfort during sexual intercourse. Weakness of the pelvic muscles prevents orgasm in both the woman and her sexual partner [26]. In prolapse of the genitals, there is a pulling pain in the vagina and a feeling of a foreign body, a feeling of constant pressure in the vagina. Later, the pain spreads to the back and buttocks. However, the biggest problems are caused by the weakening of the urinary bladder and impaired urination caused by uterine prolapse. At first it can be frequent, often uterine prolapse leads to stress incontinence (involuntary urination with laughing, coughing, lifting weights, etc.) [26,84,87,116,119,132]. With significant displacement of the bladder wall and uterine prolapse, urination is sometimes possible only after the uterus has moved back into place. In addition, the presence of residual urine causes the development of cystitis and other inflammatory diseases of the urinary system. Similar problems, difficulty passing stool and incomplete emptying of the rectum, occur with prolapse of the rectal wall. In order to go to the toilet, a woman is forced to choose an unusual situation or to help with her own hand to remove waste [28, 65]. Pelvic inflammatory diseases are often added, because the displacement of the genitals and the opening of the vaginal opening create favorable conditions for the development of infection and the formation of prolapse. Hanging or falling off of the genitals can cause trophic ulcers in the genitals (due to impaired blood supply), swelling of the cervix and vagina, and bleeding during intercourse. Sometimes

swelling and inflammation can cause an enlarged uterus to constrict. Sexual intercourse becomes impossible and social activity also decreases dramatically [63, 64, 76].

The refore, prolapse of the genitals is not only a medical problem, but also a serious social problem. It remains the focus of attention of gynecologists and doctors of related specialties. The disease often begins in the reproductive age and has a progressive character [1, 12, 34, 39,62, 66,73, 87,98,103,109].

If in previous years, prolapse of the genital organs was found mainly in older women, in recent years, the trend of younger women facing this problem has increased. [Krasnopolsky V. I. and others, 2017]. This is proven by the data of a number of authors [Ishchenko A. I. et al., 2017]. According to data, the occurrence of internal genital prolapse in patients under 30 years old reaches 10.1%, from 30 to 45 years old - 40.2%, and in patients over 50 years old - 50%. In our republic, internal genital prolapse and prolapse occur in 45% of women who have given birth to 2-3 or more, which causes discomfort, urinary incontinence, constipation and decreased libido. In this regard, problems related to sexual dysfunction, frequent inflammatory diseases of the genitals, and constipation are identified in the family. As a result, surgical interventions are required, often with recurrence of penile prolapse and descent in 2 to 10% of cases (SmithF.J.etal., 2013). It is known that the approach to treatment of women with internal genital prolapse depends on their age. Young women should consider the need to maintain or restore sexual feelings. On the contrary, the reliability of the operation is very important for elderly women, this issue comes to the fore in old age [1, 12].

Today, it was found that surgical treatment is the only effective means of treating genital prolapse [Krasnopolsky V. I. et al., 2017], but the recurrence rate of the disease after examination reaches 33-40% [Radzinsky V. E. et al., 2014]. Randomized clinical observations show that the risk of long-term anatomical relapse in patients who underwent surgery due to traditional cystocele is several times higher 12 months after surgery when corrected with a synthetic prosthesis [Giri A. et al. 2017, Li C., Gong Y., Wang B. 2016, Milani AL et al. 2017, Ferrando CA, Paraiso MFR. A. 2019, Detollenaere R.J. 2015.]. Investigations by some scientists have confirmed this, and meta-analysis results have given similar results here [9,27, 36,45,49,57,73,79,87,95,116]. The results of randomized clinical trials analyzing the rate of clinical recurrence with the help of special questionnaires did not rule out the assumption that women who underwent traditional cystocele correction have a higher risk of recurrence of internal genital prolapse. [105,108,118,124,132]. F. Natale et al. (2002) compared the effectiveness of surgical treatment of cystocele using synthetic tape Gynemesh PS (Ethicon Inc.) and Pelvicol (C.R.Bard) using a pig skin dermal system. The number of long-term relapses (recurrences) was about the same in women in both study groups.

M. Carey et al. (2009) conducted a randomized trial comparing the clinical differential effectiveness of anterior colpotomy-raphia (70 women) and reinforcement with Gynemesh PS, a polypropylene Ethicon synthetic mesh pelvic floor prosthesis (69 women). At 1 year after surgery, patients in the reticular prosthesis group reported clinical healing in 81% of cases and in 65.6% of cases in the anterior colpotomy-raphia group. Erosion of the vaginal mucosa followed by protrusion of the synthetic mesh tape was only 5.6%. Dyspareunia was observed in 5 out of 30 women (16.7 %) who were subsequently operated with a mesh implant and in 5 out of 33

women (15.2 %) in the previous colpotomy-raphia group. In general, studies in this group gave good results [25, 26, 27, 30,40,43,53,56, 61, 67, 75, 87, 93, 95,105,112,132].

Modern principles of treatment of genital prolapse

There are a number of studies in the literature evaluating the results of various methods of surgical treatment of genital prolapse. Thus, the group led by S. H. Cochrane conducted an analysis of 22 randomized clinical trials on the results of surgical treatment of pelvic organ prolapse in women [Glazener C.M.A., 2009]. Thus, the number of patients included in the meta-analysis was 2368. The authors demonstrated that abdominal sacrocolpopexy was associated with higher clinical cure rates and dyspareunia than vaginal sacrospinal colpopexy. Despite the fact that it took less time to perform this operation, this procedure cost much less and was associated with a quick rehabilitation of women. However, conventional surgical repair of cystocele was ineffective, and a higher rate of subsequent disease recurrence was noted when compared with surgical treatment of cystocele with synthetic tape. The number of women with new-onset stress urinary incontinence under stress accounted for 10% of the total number of patients who reported the onset of symptoms after previous surgical treatment. The authors also noted that simultaneous surgical procedures such as implantation using a free vaginal ring, plication, endopelvic fascia, or Birch colposuspension for abdominal sacrocolpopexy significantly reduced the incidence of denovo urinary incontinence. To date, 7 mesh prosthesis implantation systems have been proposed for pelvic surgery. All are FDA approved and quality certified as part of the current 510 protocol[77,79,93, 98,104,105].

Apogee and Perigee systems. The Perigee system (American Medical Systems, Minnetonka, MN) was developed to repair prolapse of the anterior wall of the pelvis [115,125,131]. The surgical method is performed using four trocars, which are inserted through transobturation. In contrast, the Apogee system (American Medical Systems, Minnetonka, MN) [119] has been proposed for surgical treatment of rectocele as well as for apical prolapse. In this case, access is performed using two trocars placed in the region of the ischiorectal fossa. Both implantation systems are adapted for use with porcine dermal layer and polypropylene tapes. J.N. Nguyen and R.J. Burchette (2008) reported a 55% improvement after colporrhaphy and 89% after using systems. The authors found significantly higher results of subjective satisfaction with operations in the Perigee system. No cases of inguinal or gluteal pain were reported. The frequency of erosion of the vaginal mucosa during the placement of mesh tapes was only 5%. Gauruder-Burmester et al. (2007) reported the long-term results of a follow-up of 72 women with Perigee surgery and 48 women after Apogee surgery. One year after the intervention, 93% of women with both methods reported objective recovery, erosion of the vaginal mucosa occurred in 3% of cases. M. Abdel Fattah et al. (2008) for 10 months at Perigee [64; b, 634-40] systems, Apogee [28; b. 124-130] 70 women operated with systems and complex intervention (Perigee+Apogee – 8) were observed. They indicated further development of denovo (another anatomical region) genital prolapse in 25% of cases in the group with perigee systems and 10% of cases in the group with apogee systems. No such complication was noted after the combined intervention. Accordingly, prosthesis erosion was noted in 6.3, 10.0, and 12.5% of women in the previously indicated groups. However, intraoperative complications included one case of rectal injury and one major intraoperative blood loss (more than 500 mL).

Avaulta System. This implant, consisting of Avaulta polypropylene mesh tape (C.R.Bard, Covington, GA), is a multicomponent system. This system also places a mesh prosthesis using special trocars inserted into the anterior vaginal wall as a transobturator to repair prolapse or through the ischio-rectal fossa to surgically treat posterior wall prolapse. The system also has two additional sleeves for distal placement. They are intended for further bilateral fixation of the mesh prosthesis to the junction between the transverse perineum muscles of the bulbocavernosus muscle. At this stage, the literature lacks information on large clinical trials with well-designed outcome measures[113,116,125,129,131,134,135].

The Pinnaclean duphold implantation system (Boston Scientific Corp., Natick, MA) uses a special component tool called the CapioSuture Capturing Device (Boston Scientific Corp., Natick, MA). It is used to secure a mesh polypropylene prosthesis placed in the anterior part of the pelvis, that is, in the sacro-spinal ligaments. This method excludes the need to use special trocars. The Pinnacle system is mainly used in women who have had a previous hysterectomy. During implantation, the prosthesis is placed in such a way that it completely surrounds the apical part of the vagina [93,99,103,106,110,131]

The Uphold system consists of a mesh prosthesis with two sleeves, each 4 cm long. This system is suitable for surgical treatment of anterior and apical defects of the vagina and excludes vaginal extirpation of the uterus. However, the current literature lacks information on in-depth studies with good comparative analysis showing the results of using this technique.

The Elevat System (American Medical Systems, Minnetonka, MN) [115,119] is used for the surgical treatment of posterior and apical vaginal defects, designed to be inserted through a small incision in the posterior wall. The use of this system involves the use of special trocars with an anchoring mechanism to secure a polypropylene mesh prosthesis or porcine dermal layer to the sacrospinal ligaments. Research data describing the results of using the Elevate system are not available in modern literature.

Prolite System. In world practice, the Prolite system (J&J, USA) is often used for surgical treatment. In recent years, there has been an increasing trend in the number of surgical interventions using this technology. Thus, in 2006, about 100, in 2007 - 450, and in 2008 - about 1,000 operations were performed. Thus, a significant increase in the number of women who want this operation should be expected in the future[7,20,36,41,55,56,63,72,74,76].

The polypropylene mesh implant prosthesis of the Prolit system consists of three main parts: front - supports the front wall of the vagina; supporting the apical part - middle; and back - placed on the front surface of the rectum. The essence of the method is to place synthetic soft mesh made of non-absorbable material. Special tools are used to fix the mesh implant [36,41].

C. Reusenauer et al. (2007) reported a very interesting anatomical study of the relationship of an implanted mesh prosthesis to the anatomo-physiological structures of the pelvic cavity. Such studies are of great clinical importance, because during the operation, prosthetic legs are performed without seeing inside with the help of special trocars, conductors and cannula. The essence of the operation is that in the anterior part of the pelvic cavity, the prosthesis is placed in the entire lower part of the urinary bladder, covers the front wall of the vagina, and the sleeves of this implant are inserted through the foramen obturatorium 3.1-3.4 cm medial to the obturator neurovascular bundle and the further part from Foramen Ischi 2 ,2-2.4 cm is located in the middle. In the front and back zones of the pelvis, a synthetic prosthesis can be placed

between the back wall of the vagina and the rectum. Sleeves of the posterior part of the implant are made through the sacro-spinal cords 0.6-1.0 cm through the medial part of the pudendal nerve bundle and at the same distance to the rectum in order to eliminate rectocele and enterocele. The authors showed that the risk of damage to the neurovascular bundles is minimal with proper surgical technique. A.Valentim Lawrence co et al. (2006) reported a one-year differential analysis of the effectiveness of colpotomy-raphia in 160 patients with pelvic synthetic collagen prosthesis and Prolite surgery for internal genital prolapse - complete recovery after suturing with anterior or posterior colpotomy-levatoroplasty was 14.5%, with collagen prosthesis after surgical examination - in 43.4% of cases and after Prolit operation - in 40% of cases, treatment took place. Recurrence of genital prolapse was noted in 63.6% of women after colpotomy-raphia, in 41.5% of women after installation of a synthetic pelvic prosthesis, and in 44% of women after prolith surgery. Recurrent development of genital prolapse was noted in 25, 5, 15.1 and 16% of the study groups, respectively; 8 women after colpotomy - raffia, 7 women after installation of synthetic collagen prosthesis and 3 women after Prolit surgery underwent a second operation. At the same time, after installing Pelvicol and Prolit synthetic prosthesis, erosion of the vaginal mucosa was not recorded in any case[7,56,63,81,72]

High efficiency of Prolite operation M. Cosson et al. noted by (2005). Based on the conclusion based on the data of a large retrospective study of 678 women who underwent surgery in France from 2002 to 2007, presented at the next conference of the International Society of Chemotherapy in 2005, all these operations were performed according to the standard protocol and with strict adherence to the original technique. Anterior prolift was used to surgically correct cystocele, and posterior prolift was used to eliminate rectocele. The mean age of the women studied was 63.8 years, of which 24.3% had previously undergone vaginal extirpation of the uterus, 16.7% had undergone surgical treatment of genital prolapse, and 11.1% had undergone surgical repair of stress incontinence. Simultaneous hysterectomy was performed in 50.3% of cases. Intraoperative complications were observed very rarely - in 1.3% of cases (bleeding, damage to the bladder and rectum). Early postoperative complications are also rare - in 2.5% of observations, and only 1.3% of patients required repeated surgical intervention. Early complications included hematomas - 1.8% and pelvic abscesses - 0.3%, serious complications such as interstitial phlegmon of various sizes, vesicovaginal and rectovaginal fistulas were very rare - 0.15% of cases. The average rate of recurrence of the disease after diagnosis of genital prolapse was 5.3%. The results of the surgery led to a complete cure in 94.7% of patients. First-onset stress incontinence is reported in approximately 5.4% of women. Small pelvic infiltrates and erosion of the mucous membrane of the vaginal wall were noted very rarely from 0 to 13.3% (average - 6.7%). Thus, the authors conclude that pelvic floor (diaphragm) strengthening operations with the help of prolite kits and low rates of postoperative complications are soft operations[9,15].

The most common complications of pelvic prostheses with mesh implants are infection of the prosthesis and mucosal erosion of the vaginal walls, as well as pain, dysuric events, and penile reprolapse and stress incontinence, according to the FDA's multicenter study on 10/20/2008. will be repeated. This report details some cases of perforation of the bowel or bladder and injury to the great internal vessels during the trocar procedure. A series of studies analyzing intraoperative complications reported two cases of great vessel injury among 289 women (0.7%)

who underwent Apogee or Perigee systems, as well as Prolite, plastic surgery. Approximately 30% of women with penile prolapse and stress incontinence may require surgical treatment. The incidence of dyspareunia after surgical treatment of prolapse ranges from 10 to 17% (the risk of developing dyspareunia is high when implanting synthetic mesh prostheses of nonabsorbable material).

According to sources, the recurrence rate of stress incontinence after genital prolapse surgery is 5-24%. (Noé K.G.et.al., 2015). At the same time, the use of surgical procedures such as implantation of a free vaginal ring, folding of the endopelvic fascia, and Colposuspension (lifting the vagina from the dome) by Birch method allows to reduce the number of women with stress urinary incontinence. (Reisenauer C. et al., 2007). Thus, according to the analysis of modern literature, traditional methods of surgical treatment of genital prolapse and methods of using synthetic prostheses and implants made of biomaterials demonstrate comparable effectiveness [20].

Hysterectomy is the most common operation in gynecology. In different countries, the frequency of hysterectomy varies depending on the place of residence and the cultural level of the population, the indications and the psychological approach to this operation. In Australia, the frequency of hysterectomy among gynecological operations is 40%, in Sweden - 38%, in the USA - 36%, in Great Britain - 25%, in Italy - 15.5% [46]. According to only one Russian Academy of Medical Sciences NTSAG and P clinic, about 2000 abdominal gynecological operations are performed every year, and among them, hysterectomy is 32.5 to 38.2% [4, 5].

According to the conclusions of the world literature, 75% of hysterectomies are performed through the abdominal cavity, 25% through vaginal access [12,13]. It is known that abdominal extirpation of the uterus often leads to complications, is characterized by more blood loss, longer hospital stay of women and longer time to restore their working capacity [6]. Therefore, changing the ratio in favor of the vaginal or laparoscopic method for removing the uterus is of medical, economic, psychological and social importance [11,15,17,22,24,28, 29,52,81,98,106,115,133].

Many gynecologic surgeons believe they know exactly the indications or contraindications for vaginal or abdominal hysterectomy. However, there is still no agreement on this. Almost 100% of gynecological surgeons have one of these two classic surgical techniques [91, 93].

H. Rich believes that as the professional skill of gynecological surgeons increases, the frequency ratio of vaginal, abdominal and laparoscopic hysterectomy will change. According to him, 50% of uterine extirpations in benign diseases can be performed through vaginal access without the use of laparoscopy. The main reason for the recurrent course of this disease is genetically determined systemic insolvency - connective tissue dysplasia in patients with genital prolapse 38% [35,63,96,104,121]. In this regard, the long-term results of widely used plastic surgery using own tissues are not satisfactory for both surgeons and patients.

The problem of vaginal prolapse after hysterectomy remains relevant for gynecological surgeons and doctors of related specialties. Pelvic prolapse after hysterectomy directly threatens the life of patients, but it also causes functional disorders of various organs and systems, as well as a decrease in the quality of life of women. Most often, vaginal prolapse is caused by the prolapse of organs after removal into the empty space left after hysterectomy. In such cases, cystocele or

rectocele often develops - prolapse of the front or back walls of the vagina together with the bladder or part of the intestine is detected [5,7,9,28,29,44,51,58,67,80,89,99,101,108,109,132] .
Prolapse is usually accompanied by various unpleasant symptoms, which puts a woman in a very uncomfortable position [1,8,65.]. Often this process is accompanied by severe pain, delay or, conversely, stress incontinence, frequent urination, problems with bowel movements [14,16,18,24,37,40,43,45,50,74,78]. With complete prolapse of the vagina after removal of the uterus, the mucous membrane of its walls is prone to severe injuries, which leads to infections, abscesses, and even tissue necrosis [27,119,120]. According to Professor Heitz (2009), levator detachment is associated with a 3-4 point risk of cystocele recurrence after previous colporrhaphy. Levator assessment may identify patients at high risk of relapse and may be useful as a selection criterion prior to mesh implantation[38,124].At the current stage, the effectiveness of surgical treatment of internal genital prolapse, as well as the safety of using synthetic implants, remains an important problem. The technology of mesh implantation has a very good positive result for the anatomical result, but it can lead to complications, including sexual disorders, rectal and bladder dysfunction, erosion of the vaginal mucosa, etc. [21,122,127, 131]. In recent years, an increase in legal claims related to the use of mesh prostheses has been noted [20,36,72]. Controversial points in the use of reticular prostheses in surgery is the possibility of using them at a younger age. In this regard, sacro-colpopexy is a pathogenetic and anatomically based tactic of operative treatment. This method allows to restore the correct anatomy of all structures of the pelvic organs and attach them to stable formations (promontorium, sacrum nose) using synthetic materials [9,41,55,56,63,74,76].
For the first time, sacrocolpopexy was performed laparoscopically in the early 90s [26,54]. At the same time, the most important points of surgical intervention, which have proven themselves well when performed through laparotomy, have been adapted to laparoscopic access. It should be noted that even the initial experience with the use of Laparoscopic sacrocolpopexy allowed to demonstrate its advantages, such as less trauma compared to laparotomy, a significant reduction in blood loss, a shorter hospital stay for women, and a faster recovery of work capacity [62, 67,81,93,95,98,110,125]. In recent years, many scientific works on the long-term results of Laparoscopic sacrocolpopexy have appeared in modern foreign literature [41,55]. At the same time, there are no scientific studies summarizing the use of para-vaginal reconstruction in the surgical treatment of cystocele in the existing literature. Otsutstvuyet takje analiz effektivnosti sochetannix s sacropexiyey dopolnitelnix korigiryuyushchix operativox vmeshatelstv.
There is also no analysis of the effectiveness of additional corrective surgical examinations in conjunction with sacropexy. Only one work emphasizes the problem of erosion of the vaginal mucous membrane and methods to eliminate the subsequent complications [32,36]. Laparoscopic sacropexy is rarely used in our country, and there are no results reflecting the current state of this problem. Currently, there is no single understanding of the pathogenetic mechanisms of internal genital prolapse and their recurrence. In order to further study the issues of etiopathogenesis and to further improve the tactics of surgical correction, it is important to determine the algorithm of examination and treatment of patients for early detection of pathologies in various parts of the pelvic cavity. Determining the tactics of surgical examination, in particular, in severe degrees of internal genital prolapse, causes great

difficulties. This is related not only to the elimination of the main symptoms of the disease, but also to the need to completely restore the normal anatomy of the pelvic organs, as well as the functional disorders of the pelvic organs without complications and recurrence [21, 30].
The above-mentioned once again confirms the need for improvement of clinical observations and pathogenetic justification of a differentiated approach to the choice of the method of surgical correction of internal genital prolapse. All surgical treatment methods available today do not always completely eliminate the pathology, and some of them have a large number of relapses. The development of new methods of operation using synthetic prostheses to strengthen the pelvic bone apparatus is a current topic of surgical gynecology[5].

Analysis of unresolved issues and directions for their resolution

A further review of surgical repair for pelvic organ prolapse noted that a critical element of any approach to surgical prolapse repair is reliable apical pelvic support [2,3,7,15,22,30,36,46,47,53,61,63,66,68.] According to various studies, up to 83% of all cases of WHO relapse occur in this section, and repair of apical prolapse reduces the risk of developing prolapse in the anterior section by half [8,11,17, 69, 71,72,79,87,102,109]. In this regard, many researchers recommend the use of types of anti-relapse operations with the use of various synthetic materials. Repair with a synthetic implant OPUR is indicated for use in all types of surgical prolapse, especially in definite uterine prolapse. The bladder, like a hammock, is held in place by polypropylene netting. Six arms and 8 fixation points provide natural and reliable pelvic support throughout life. The implant is installed transvaginally, without stitches. After three days, the patient returns to his normal lifestyle without any restrictions. The efficiency of the operation is 97 percent, there is no risk of repeated prolapse. Together with OPUR, the surgeon can correct the back wall of the vagina (posterior colpoperioneraphy), restore the correct physiological position of the main muscles of the perineum - the levator anus muscles (levatoroplasty). OPUR has no significant drawbacks. Replacement of the sacro-uterine ligaments with a polypropylene tape (sacrospinal hysteropexy and vaginopexy) is a classic operation for uterine prolapse (hysterectomy) and prolapse of the vaginal walls. Polypropylene tape firmly holds the uterus and vaginal walls in the position necessary to restore the function of the pelvic organs. Chances of relapse are very low. The tape is inserted through a laparoscopic robot-assisted access, and the operation takes about two hours. It was established on December 19, 1999. The guide is recommended for young women interested in maintaining an active sex life [67,81,98,110,125]. Relatively small size of the network (in contrast to transvaginal operations) and its position outside the damaged areas during intercourse reduce the possibility of vaginal erosion [69,71].
Disadvantages: volumetric intervention under general anesthesia is complicated if operations on abdominal organs have been performed before. There may be erosion of the vaginal belt, pain and discomfort during intercourse at the site of tape fixation[45,49,53].
In recent years, many publications on the long-term results of laparoscopic sacrocolpopexy have appeared in foreign literature [67,81,98,110,125]. However, no generalizations were found in the available literature on the use of paravaginal reconstruction in cystocele repair. There is no analysis of the effectiveness of additional corrective interventions combined with sacropexy.

Only one work emphasizes the problem of vaginal erosion and methods of preventing complications [6,7,22,27,42,55,56,59,60].

A new trend in surgical repair of pelvic organ prolapse was the emergence of endoprosthetic implantation coax systems. The main difference between these systems is the fastening to the strongest tendon structures of the pelvis (Sacro-spinous ligaments, obturator membranes) with the help of fastening elements-"harpoons". The advantages of this approach are low invasiveness (trocars are not made through tissue), high reliability and safety, adequate apical support, and low cost compared to transabdominal interventions [62,63,68,70].

Currently, there are many devices on the market for anchor reconstruction for pelvic organ prolapse (Elevate, Pinnacle/Capio, Uphold, SeraPro, TFS, etc.).The Pinnacle and Uphold system (Boston Scientific Corp., Natick, MA) involves the use of a special Capio Suture Capturing Device (Boston Scientific Corp., Natick), Pinnacle and Uphold System (Boston Scientific Corp., Natick, MA) involves the use of a special device. Capio Suture Capturing Device (Boston Scientific Corp., Natick, MA) to attach a mesh prosthesis placed in the sacro posterior dome ligaments, which avoids the need to pass trocars [59;p.37-46, 60;p.99-105, 71;p.981-87,] The Pinnaele system is used in hysterectomy patients and a trapezoidal reticular prosthesis equipped with four arms, which is placed in such a way as to surround the upper part of the vagina during implantation [27,42].

Thus, the study of the analysis of sources on the epidemiology, etiopathogenesis, clinic, diagnosis and treatment methods of genital prolapse showed that despite many studies on improving the technology and tactics of treatment of this disease and on the in-depth study of the anatomical and functional conditions of the occurrence of pelvic organ prolapse, this problem is completely unsolved. not resolved. In the doctrine of genital prolapses, its pathogenesis requires the solution of many issues related to increasing the tension of the pelvic diaphragm, which is called the pelvic cavity, as well as the development of methods that strengthen the ligamentous system of the pelvic cavity with the help of a more advanced surgical procedure.

CONCLUSIONS

1.The frequency of female genital prolapse tends to increase and rejuvenate, associated with the increase in the average life expectancy of women.

2.The use of various synthetic materials to strengthen the pelvic floor is considered unacceptable, due to traumatization of pelvic tissues and the development of various complications in the postoperative period.

3.It is necessary to develop new methods to strengthen the pelvic floor at the expense of its own ligamentous apparatus of the uterus and appendages.

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