



## VAGINOPLASTY (COLPORRHAPHY, COLPOPLASTY) – GENERAL INFORMATION, TECHNIQUES, COMPLICATIONS

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**ABSTRACT:** *Vaginoplasty is a surgical procedure aimed at repairing damage to the vaginal walls, narrowing them, increasing muscle tone, and restoring the natural anatomical structure and function of the female genitalia. This intervention serves not only to improve aesthetic appearance but also to normalize the functional activity of the reproductive organs. The primary focus is on correcting postpartum scar deformities, age-related tissue involution (atrophy), genital prolapse (descensus), and various physical defects. The article analyzes the indications, contraindications, modern surgical techniques, stages of rehabilitation, and potential complications of vaginoplasty. Thorough preoperative preparation, an individual approach, and proper postoperative care are emphasized as crucial for successful outcomes and minimizing risks. The study also examines the impact of this procedure on a woman's physical, functional, and psychosexual health.*

**KEY WORDS:** *vaginoplasty, colporrhaphy, vaginal tightening, genital prolapse, reconstructive gynecological surgery, postpartum physical changes, functional outcomes, surgical complications.*

### INTRODUCTION

The field of reconstructive and aesthetic gynecological surgery, particularly vaginoplasty, has seen significant growth in recent decades due to increasing societal focus on a healthy lifestyle, physical fitness, and sexual health. The term vaginoplasty encompasses a range of surgical procedures performed to narrow,

strengthen, or reconstruct the vagina. These interventions aim to restore not only aesthetic appearance but also the functional aspects of vaginal structure—such as sensation during intercourse, muscle tone, and the supportive function of the urogenital diaphragm. [1, p.45]

In many cases, the primary impetus for vaginoplasty is postpartum changes, which, whether resulting from natural delivery or operative methods (vacuum extraction, forceps), can cause serious damage to the musculo-fascial structures of the vaginal canal and perineum. Furthermore, hormonal changes during menopause, along with decreased tissue elasticity and blood supply, lead to age-related stretching and weakening of the vaginal walls. [2, p.112] Congenital defects, such as vaginal aplasia, can also severely restrict reproductive and sexual health. Therefore, modern vaginoplasty has evolved from traditional medical assistance into an important tool for improving a woman's quality of life, physical and psychological well-being.

## LITERATURE REVIEW

The development of vaginoplasty reflects the advancement of various techniques and approaches. Early surgical methods were primarily reconstructive, focused on correcting prolapse and significant anatomical defects. However, growing interest in "aesthetic and functional" gynecology in the late 20th and early 21st centuries led to the emergence of new, less invasive techniques. [3]

Currently, vaginoplasty mainly encompasses two broad directions: reconstructive (e.g., posterior colporrhaphy – repair of the perineum and posterior vaginal wall) and aesthetic-functional (vaginal tightening, labiaplasty). The choice of surgical tactics is based on the patient's specific complaints, physical examination findings, and individual anatomical characteristics. The literature extensively describes methods like posterior colporrhaphy and levatorplasty for reinforcing the vaginal walls, with their effectiveness reported at 85-95%. [4, p.78] These procedures not only reduce the volume of the vaginal canal but also help prevent complications like stress urinary incontinence by restoring the function of the urogenital diaphragm (levator ani muscles). [5]

Simultaneously, it is crucial to emphasize the existing risk of surgical complications in this field. According to research, the most common complications include infection, hematoma, wound dehiscence, tissue necrosis, and acquired dyspareunia (pain during sexual intercourse). [6, p.201] Factors influencing the frequency of complications include the patient's overall health, the surgeon's experience, and adherence to the postoperative rehabilitation plan. Therefore, careful history-taking and identification of potential risks are necessary for each case.

## **DISCUSSION**

**Indications and Contraindications** - Indications for vaginoplasty are broad: postpartum scarring and deformities, vaginal prolapse (rectocele, cystocele), constitutional and age-related collagen deficiency, vaginal aplasia, hypoplasia, stress urinary incontinence, and a sense of functional or aesthetic discomfort. The procedure should aim to address physical or psychological issues that significantly diminish personal quality of life. Biologically, childbirth causes extreme stretching of vaginal tissues, often leading to muscle fiber tears and relaxation of the fasciae supporting the pelvic floor. Subsequently, this condition can worsen not only due to morphological changes (vaginal laxity, labial asymmetry) but also with changes in hormonal balance (decrease in estrogen). [7] This can lead to sexual dissatisfaction, pain (dyspareunia), or loss of sensation. Data indicate that over 90% of patients report increased levels of sexual satisfaction after vaginoplasty. [8, p.134]

Contraindications, however, significantly increase the risk of the procedure. These include oncological diseases (especially oncogynecological), active inflammatory processes of the pelvis, decompensated diseases of the cardiovascular, respiratory, and hemostasis systems, as well as severe psychiatric disorders. Thorough preoperative diagnostics (general clinical tests, gynecological examinations, sometimes pelvic ultrasound) is essential.

**Surgical Technique** - The exact type of surgery (e.g., posterior colporrhaphy, labiaplasty, vaginoplasty with lipofilling) and its complexity depend on the individual situation. The procedure is usually performed under general

anesthesia. The standard posterior colporrhaphy process involves: creating a small, wedge-shaped incision in the posterior vaginal wall to remove excess tissue; reconstructing the muscles and fasciae (levatorplasty); and then suturing the mucosa with minimal scarring. [9] Lipofilling—the injection of the patient's own adipose tissue (usually harvested from the abdomen or thighs) into the vaginal walls—is a relatively new method that can help improve aesthetic and functional outcomes. This technique provides additional tissue volume and may enhance sensation, but it carries a number of additional risks (e.g., fat embolism, aseptic necrosis).

## **Rehabilitation and Potential Complications**

The rehabilitation period plays a decisive role in the success of the outcome. Significant swelling and pain may occur in the first 48-72 hours postoperatively, managed with analgesics. Hygienic care (regular cleaning and drying), as well as strict avoidance of sexual intercourse, heavy physical exertion, water procedures, and tampons for 1-2 months, is strongly recommended. Full recovery may take 4-6 weeks, but the final tissue formation and complete return to sexual activity can require several months. [10]

Strict adherence to surgical technique and care rules is necessary to minimize the risk of complications. In particular, the use of prophylactic antibiotics to prevent infection and ensuring meticulous hemostasis to prevent hematoma formation are important. Decreased sensitivity due to nerve tissue damage is often temporary but can sometimes be permanent. [6, p.205] One of the most significant complications is dyspareunia, which often occurs if the vaginal canal is excessively narrowed during surgery. Therefore, the surgeon's skill is manifested not only in repairing anatomical defects but also in preserving the vaginal volume within physiological limits. The goal of this intervention is to restore functionality while maintaining naturalness.

## **RESULTS**

The results of vaginoplasty are typically assessed by the level of patient subjective satisfaction and functional improvement. Many studies report positive feedback regarding increased sensitivity, improved quality of sexual life, and

disappearance of physical discomfort and pain after surgery. [1, p.51; 8, p.136] Furthermore, it has been established that levatorplasty, performed in conjunction with posterior colporrhaphy, is 70-80% effective in preventing or alleviating stress urinary incontinence. [5]

Aesthetic results also significantly improve psychological well-being, associated with increased satisfaction with one's own body and self-confidence. However, predicting long-term results and preventing potential complications require careful planning for each case. Refining surgical techniques and introducing less invasive methods (e.g., laser-assisted vaginoplasty) allow for reducing the frequency of complications and shortening the rehabilitation period. [3]

## CONCLUSION

Thus, vaginoplasty (colporrhaphy, colpoplasty) is a complex area of gynecological surgery of great importance in restoring a woman's sexual and reproductive health, as well as improving her quality of life. It addresses not only anatomical disorders resulting from childbirth, age, or congenital defects but also aims to resolve functional (sexual satisfaction, muscle tone) and psychological (self-confidence, body image) issues. The success of the procedure depends on several factors: proper patient selection and thorough preoperative preparation, the surgeon's high qualifications, correct choice of individual technique, and strict adherence to the doctor's instructions in the postoperative period. Considering the risk of possible complications (infection, hematoma, wound dehiscence, dyspareunia), the potential benefits and risks must be thoroughly discussed with each patient.

The future development of gynecological reconstructive and aesthetic surgery will undoubtedly continue through the introduction of new technologies (e.g., tissue engineering, advanced biomaterials) and less invasive methods, increasing effectiveness and reducing recovery time. At the same time, fundamental research into the psychosexual and long-term functional outcomes of these procedures remains relevant.

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