

**FEATURES OF THE COURSE AND THERAPY OF VESTIBULITIS OF THE VULVA  
AFTER CREATION OF AN ARTIFICIAL VAGINA FROM THE SIGMOID COLON****Ibragimova S.Sh****Abstract:**

This study examines the clinical features, progression, and treatment strategies for vestibulitis of the vulva in patients who have undergone creation of an artificial vagina using the sigmoid colon. The research highlights the pathophysiological mechanisms associated with postoperative complications, including inflammatory changes, microbial colonization, and mucosal sensitivity. Diagnostic approaches, therapeutic protocols, and preventive measures are discussed to improve patient outcomes. The findings emphasize the importance of early detection, individualized treatment planning, and multidisciplinary management in preventing chronic inflammation and preserving vaginal function.

**Key words:** Vestibulitis of the vulva, artificial vagina, sigmoid colon, postoperative complications, therapy, inflammation, treatment strategy, gynecological surgery.

**Introduction**

The creation of an artificial vagina using the sigmoid colon is a well-established surgical approach in gynecology, primarily employed for the management of congenital or acquired absence of the vagina. This technique, known as sigmoid vaginoplasty, is indicated in conditions such as Mayer–Rokitansky–Küster–Hauser (MRKH) syndrome, androgen insensitivity syndrome, vaginal agenesis, and severe vaginal loss secondary to trauma, tumor resection, or infection. The procedure utilizes a segment of the sigmoid colon, which offers distinct advantages: adequate length and diameter, natural lubrication due to mucus secretion, and durable epithelial lining capable of withstanding mechanical stress. Despite these benefits, postoperative complications may arise, including stenosis, prolapse, excessive mucus discharge, and inflammatory conditions affecting the neovagina and surrounding structures.

One of the most challenging complications in this context is **vestibulitis of the vulva** — an inflammatory condition affecting the vestibule, the anatomical area surrounding the vaginal opening. Vestibulitis is characterized by erythema, tenderness, burning pain, and dyspareunia, often leading to a significant reduction in quality of life. While vestibulitis has been studied extensively in women with natural vaginal anatomy, its manifestation and course in patients with a neovagina constructed from the sigmoid colon remain insufficiently documented. In these patients, anatomical, histological, and microbiological differences between the neovagina and a natural vagina can influence disease pathogenesis, symptom presentation, and treatment response.

The vestibule plays a critical role in the functional and protective mechanisms of the female genital tract. In the context of a sigmoid neovagina, the vestibule remains covered by squamous epithelium of vulvar origin, but the inner canal is lined by colonic mucosa. This juxtaposition of two different tissue types creates a unique microenvironment, where interactions between the mucosal immune system, local microbiota, and mechanical stress may predispose to inflammatory changes. Post-surgical alterations in blood supply, nerve endings, and tissue elasticity further contribute to the vulnerability of the vestibular area. Moreover, the persistent mucus secretion from the colonic mucosa may alter the pH and moisture balance of the vulvar vestibule, influencing microbial colonization patterns and potentially triggering chronic irritation.

From a pathophysiological standpoint, vestibulitis in this patient population may arise from multiple mechanisms. Mechanical trauma due to intercourse or gynecological examination can lead to microtears, which become inflamed due to the altered microbiological milieu. The colonic mucosa's mucus production, while beneficial for lubrication, may foster colonization by microorganisms atypical for the vaginal environment, including coliform bacteria. These microbial shifts, combined with immune dysregulation in the postoperative period, can promote persistent low-grade inflammation. Additionally, residual sutures, scarring, or

stenotic segments at the junction between the vestibule and neovagina may create frictional points and sites for recurrent irritation.

The clinical presentation of vestibulitis in women with a sigmoid neovagina often mirrors that in women with a natural vagina: burning pain, localized redness, swelling, and discomfort during penetration. However, differences may exist in symptom severity, triggers, and progression due to the presence of colonic mucosa. In some cases, symptoms may be exacerbated by increased mucus secretion, unusual odor, or sensitivity to changes in hygiene products. The chronic nature of vestibulitis can significantly impact sexual function, self-esteem, and psychological well-being, making effective diagnosis and management crucial.

Diagnosis of vestibulitis in this specific patient group requires a nuanced approach. While visual inspection, cotton-swab testing, and patient history remain central to evaluation, additional microbiological and histological studies may be warranted to distinguish inflammatory changes from other postoperative complications such as granulation tissue formation or localized infections. In particular, cultures may reveal mixed bacterial populations, including intestinal flora, necessitating tailored antimicrobial therapy. Histological examination can help differentiate between nonspecific inflammation, contact dermatitis, and lichen sclerosus, conditions that may require different therapeutic strategies.

Therapeutic management of vestibulitis following sigmoid vaginoplasty is complex and must be individualized. General approaches include local anti-inflammatory agents, topical anesthetics, systemic antibiotics or antifungals (when indicated), and physical therapy aimed at desensitization. However, standard treatment protocols developed for patients with a natural vagina may not always be directly applicable, given the unique tissue characteristics of the neovagina. For example, certain topical medications may not be well tolerated on colonic mucosa, necessitating modified formulations or application techniques. Additionally, preventive strategies—such as patient education on hygiene, lubrication during intercourse, and early reporting of symptoms—play a vital role in minimizing the risk of chronic inflammation.

The scarcity of focused research on vestibulitis of the vulva in women with a sigmoid neovagina represents a significant gap in gynecological literature. While isolated case reports and small series describe inflammatory complications after sigmoid vaginoplasty, systematic investigations into their prevalence, pathogenesis, and optimal treatment remain rare. This lack of comprehensive evidence hampers the development of standardized clinical guidelines, leaving many practitioners reliant on extrapolating from data on vestibulitis in women with natural anatomy.

The significance of studying this condition lies not only in improving postoperative outcomes but also in addressing the broader issues of sexual health, psychological adaptation, and quality of life for affected women. Inadequate management of vestibulitis can lead to chronic pain syndromes, avoidance of sexual activity, and strain on intimate relationships. Furthermore, persistent inflammation may predispose to secondary infections or scar formation, potentially complicating future gynecological interventions.

In the modern era of reconstructive gynecology, patient-centered care demands that functional outcomes be given equal weight alongside anatomical success. This means that beyond achieving a patent neovaginal canal with satisfactory length and lubrication, long-term follow-up must focus on ensuring comfort, sexual satisfaction, and freedom from debilitating complications such as vestibulitis. Understanding the distinctive features of vestibulitis in the context of sigmoid vaginoplasty is therefore essential for gynecologists, urologists, colorectal surgeons, and other specialists involved in multidisciplinary care.

Given the above considerations, this study seeks to analyze the clinical features, progression patterns, and therapeutic responses of vestibulitis in women after creation of an artificial vagina from the sigmoid colon. By identifying characteristic symptoms, risk factors, and effective treatment modalities, we aim to contribute to the development of evidence-based protocols tailored to this unique patient population. Ultimately, improving awareness and knowledge in this area can help ensure that the benefits of sigmoid vaginoplasty are not undermined by

preventable or manageable inflammatory complications, thereby enhancing the overall quality of life for women undergoing this life-changing reconstructive procedure.

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