

Combined and Reconstructive Plastic Surgery in the Treatment of Dysplasia and Cancer of the Vulva

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Abstract

The incidence of cancer of the vulva (CV) with certain fluctuations over the past 17 years (2001 - 2018) in the Novgorod region has increased almost 3 times, mainly in the elderly, although younger people associated with HPV also become ill. It was found that the use of new technologies of reconstructive plastic surgery for vulva cancer and dysplasia of II-III degree in 214 patients, including cryoapplication and extended operations using radio-wave scalpel devices "harmonics", followed by reconstructive plastic surgery for vulva cancer, reduced blood loss and mortality to 0.58 per 100 thousand women.

We observed 95 patients with vulvar dysplasia and sclerotic lesion, treatment with photodynamic therapy (PDT) was effective only in 41 women ($43.1 \pm 4.2\%$), and the rest had a relapse. The use of new reconstructive plastic surgery, including with the use of abdominal skin and fascial flap combined with vascularized lower segments of the rectus muscles (patent for invention № 2580665 from 11.11.14), have helped to reduce complications, improve cosmetic effect and reduce the duration of lymphorrhoea in 2 - 3 days.

Keywords: *Dysplasia; Vulvar Cancer; PDT; Cryoapplication; Resection of the Urethra; Reconstructive Plastic Surgery of the Abdominal Skin and Lower Segments of the Rectus Muscles*

Introduction

In the modern system of pathogenesis special attention, along with papilloma infection (HIV). However, oncogenic HPV types are not the only factors in malignant transformation. There are two early variants of vulvar cancer: HPV - positive (condylomatous), more often in the young; HPV-negative (keratous) in elderly and senile women [3,5] (Figure 1).



Figure 1: Vulvar cancer: a) condylomatous form with ulceration and transition to the urethra and anal ring; b) keratous form with tumor (T1NoMo) in the clitoris against the background of sclerotic lichen.

The incidence of vulvar cancer (CV) according to various authors is on average 2.0 per 100,000 population. In Russia, the standardized incidence of CV in 2018 is 1.16 with an increase to 12.94 per 100 thousand population by the age of 80 [1]. In the Novgorod region, the incidence of CV with certain fluctuations over the past 17 years (2001 - 2018) has increased by 2.77 times (Figure 2).

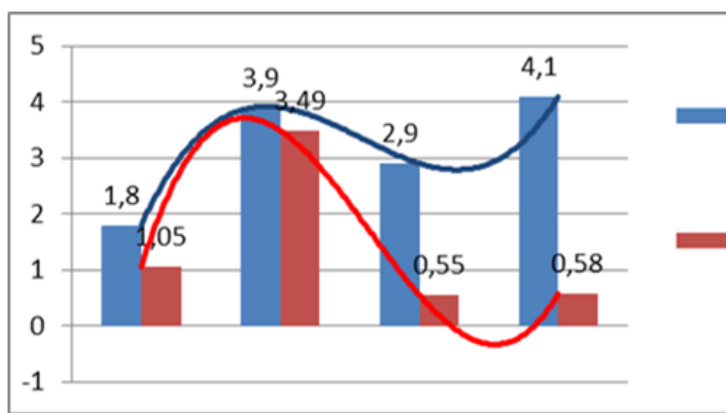


Figure 2: Dynamics of morbidity (-) and mortality (-) from vulvar cancer (per 100 thousand) in the Novgorod region (2001-2018).

Despite the increase in morbidity and the continuing high proportion of patients with locoregional spread of the disease (on average 50 - 60%), a decrease in mortality was observed from 3.49 (2005) to 0.58. The situation with advanced forms of CV is a social problem on the one hand, when women of advanced and senile age mistakenly believe that a visit to a gynecologist is “not necessary”, despite the appearance of a light night itch. On the other hand, this problem is medical, since CV is the final stage of a long-existing process of vulvar dysplasia, papillomatous growths and sclerotic lichen, which begins at a younger age and preclimacteric period.

The problem of operations for vulvar cancer is that the tumor occurs against the background of dystrophic processes that go beyond the organ itself, anatomically close location of the urethra, vagina and anal canal, the discharge from which leads to maceration of the postoperative wound. Necrosis and the eruption of the joints [2,4]. An individual approach is required, including FDT sites of inguinal dystrophy, preservation of the urinary catheter and a liquid table for at least 5 days.

An assessment and improvement of methods of treatment of vulvar dysplasias and assessment of pathogenetic variants of vulva cancer in the Novgorod region and prospects for the use of new technologies in the treatment of locoregional cancers, including those involving the urethra.

Materials and Methods

The effectiveness of treatment of vulvar dystrophy (VIN I-II degree) by the method of photodynamic therapy (PDT) in 41 out of 95 women (43.1 ± 4.2%). However, dysplasia of II-III degree, sclerotic changes with the formation of pronounced horn scales prevent complete PDT and lead to relapse of the disease. In these cases, we also performed surgical treatment as a number of authors [3].

The use of existing methods of combined treatment cannot be considered satisfactory. High efficiency of surgical treatment is combined with a large number of postoperative complication. Lack of tissue when suturing the wound leads to skin tension, blood supply disorders. Vaginal discharge, acts of urination and defecation contribute to maceration, suppuration and necrosis, ranging from 80 to 100% [2].

For cancer of the vulva in order to avoid dispersion of tumor cells excision is always carried out radiowave scalpel and apparatus “Harmonics”. In most cases, the plastic after vulvectomy was carried out with full-fledged skin-fascial flaps from the inner surface of the thighs.

In recent years the excision of the tumor was preceded by her credibilitate to t - 185° using the apparatus ERBE-6 exposure 3 - 5 min (Figure 3). The results indicate the prospects of this approach, allowing a fixed tumor; it is more convenient to tighten and excise, to reduce blood loss.

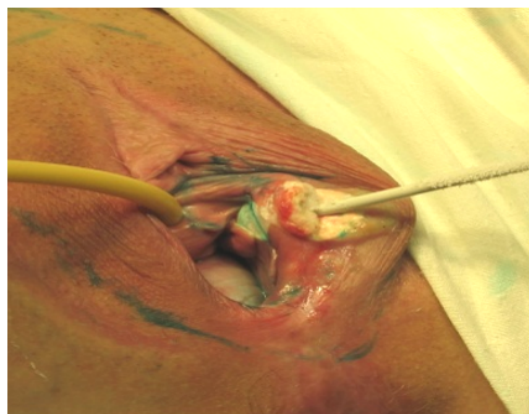


Figure 3: Cryoapplication of tumour.

To close the wound, full-fledged skin and fascial flaps are used from the inner side of the thigh, which allows us to choose an adequate amount of surgical intervention and is justified in many positions [4,7,8].

This area has the largest excess of tissue and is directly adjacent to the wound. Secondly, this area is well supplied with blood due to the 2 main arteries that pass through the broad fascia of the hip: the lower rectal and perineal arteries, which are branches of the internal sramnaya artery and the lower gluteal artery. For large volumes of the upper third of the vulva involving the urethra mouth in 13 patients, we performed the canal was excised strictly perpendicular within 0.8 - 1 cm, so as not to damage the internal sphincter. An abdominal skin-facial flop was used for stitching from above (the stitches-internal fascial-subcutaneous-muscular and 4 stitches-skin-mucosal and mucosal-mucosal from below).

Closure of the wound was carried out at the beginning cross mobilized segments of direct muscles of a stomach on the vascular pedicle. Last create the missing When the tumor is located in the upper part of the vulva, we developed a method for plasticizing and improving the appearance of the labia majora from the tissues of the anterior abdominal wall (Patent No. 2580665 for invention dated 11.11.14) (Figure 4 and 5). The incision was performed using Pfannenstiel, which can be used for revision and removal of inguinal-femoral lymph nodes. The abdominal flap was mobilized up to 5 - 6 cm below the navel, and the lateral half of the rectus muscles together with the epi-gastric inferior were crossed across with the “Harmonics” device. Volume of the labia majora and represent a unique plastic material for vascularization and lymph drainage. In the region of the decussation of the muscles and the ends of the segment performed the fixation to the muscles of the vagina with absorbable sutures so that they hung over the mouth of the urethra and did not close the symphysis of the pubic bones.

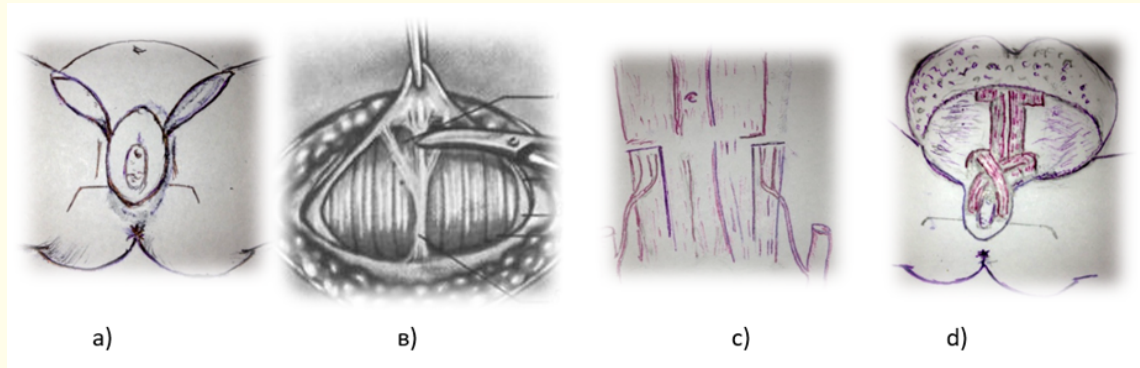


Figure 4: a) Excision of the vulva and inguinal areas; b) and c) slit with a Pfannenstiel exposure of the rectus muscles and epigastric inferior; d) formirovanie of the labia majora cross segments of the rectus muscles.

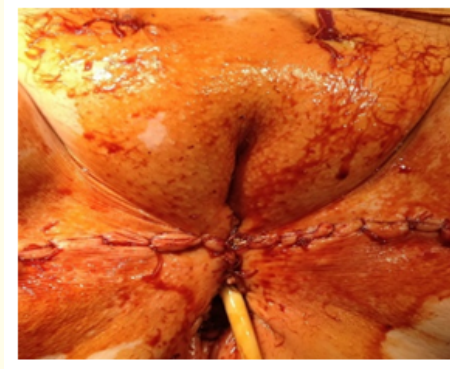


Figure 5: View of the vulva immediately after an extended vulvectomy with plastic surgery skin-muscle flap of the abdominal wall in combination with the medial area of the skin to relieve the tension on the seams.

Then was sutured fascia rectus muscles of the abdominal wall, put 6 - 7 stitches by Donati on the skin of the perineum and posterior vaginal wall tension in order to determine to what level will the skin defect to be filled abdominal skin and fascial flap with no tension. Abdominal skin and fascial flap was laid on the wound surface, adapting it by cutting off the excess and sharp areas of the skin. Determining the projection of the abdominal flap, adjacent to the pubis, imposes two provisory internal anchor sutures to the periosteum, which is then stitched to the abdominal flap (without the skin), forming the genital fold.

Then through a separate puncture of the abdominal flap in the inguinal areas has introduced an active drainage in the inguinal-femoral area. Then every 0.7 - 0.8 cm for the tightness of stitches on the skin and the vaginal mucosa around the entire circumference and nodal skin sutures for Donati in inguinal-femoral area.

Surgery was performed in 14 women, mostly aged 45 to 57 years with abdominal obesity. The process is localized on the skin and mucosa of the anterior half of the vulva. In one case, focal leukoplakia was as an independent disease, in the other case was diagnosed

with the initial cancer. Healing was by primary intention, with the exception of 2 women (14,2 ± 2,4%) with obesity and diabetes type II, including one patient with resection of the distal urethra.

Thus, the choice of reconstructive plastic surgery depends on.

Reconstructive vulvectomy abdominal flap combined with segments of straight muscle on the vascular pedicle has been the reduction in the duration of lymphorrhoea in 3 - 4 days, and the formation of the appearance of the organ.

Summary

1. The use of cryoapplication and radio-wave scalpel devices "Harmonics" to reduce blood loss from the tumor and as a consequence strengthen meadow ablative and antitumor.
2. An important aspect of vulvectomy with the plastic wound surface of skin-fascial flap of the abdominal wall in combination with the segments of the rectus muscle on the vascular pedicle was possible to reduce the duration of lymphorrhoea for 3 - 4 days and improve the appearance of the organ.
3. When the mouth of the urethra is involved in the tumor process crossing it within 0.8 - 1 cm and stitching it to full-fledged skin-fascial flaps with 2-storey seams and the vaginal mucosa allows you to maintain the function of retaining urine. Only in 2 cases, the healing took place by secondary tension.

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