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INGUIN-PELVIC LYMPHODISSECTION IN THE TREATMENT OF METASTATIC LESION OF REGIONAL LYMPH NODES IN VULVA CANCER

Abstract. Knowledge of the prevalence of the cancer process and its microscopic signs helps to establish the stage of development of the disease helps to assess the likelihood of tumor recurrence and provides information that will allow the doctor to predict the therapeutic effect. In vulvar cancer, the tumor often spreads along the length and by metastasizing to regional lymph nodes (inguinal, femoral), and then to the pelvic lymph nodes. In malignant tumors, the level of lymph node damage, which can be determined by lymph node dissection, is of great importance for the choice of treatment method.

Keywords: lymph node dissection, lymphovascular invasive lesion.

Introduction

The incidence of RC is less than half of one percent of the global incidence of malignant tumors. In 2018, there were 44.000 new cases of vulvar cancer worldwide, while the number of deaths was about 15.000 cases. It should be noted that the incidence of RV is higher in high-income countries such as Europe, North America and Oceania [1; 2; 3].

The most important prognostic features of vulvar carcinoma are tumor size, depth of invasion, lymph node status, and the presence of distant metastases. Historically, the assessment of the status of the inguinal nodes required the performance of a standard inguinal lymphadenectomy for all types of vulvar cancer. However, this procedure is associated with a high risk of developing lower extremity lymphedema (approximately 30–70%) in patients

undergoing total groin-femoral lymph node dissection, especially in combination with radiation therapy [4; 5; 6]. In this connection, it is necessary to conduct research in the field of developing criteria for conducting lymph node dissection in RC [7].

Materials and methods. An analysis was made of the results of examination and treatment of 186 patients with vulvar cancer who were treated at the RSSPMCO&R, MSRC named after P. A. Herzen – the branch of the Federal State Budgetary Institution “NMITs Radiology” of the Ministry of Health of Russia (Moscow, Russian Federation), as well as the clinic of Istinye University (Istanbul, Turkey) from 2011 to 2020.

In vulvar cancer, the tumor often spreads along the length and by metastasizing to regional lymph nodes (inguinal, femoral), and then to the pelvic

lymph nodes. In malignant tumors, the level of damage to the lymph nodes is of great importance for the choice of treatment method. Regional spread

occurred in the adjacent areas of the lower third of the vagina, in the rectal ligament. Later, invasion into the anorectal region developed.

Table 1. – Clinical features of vulvar cancer in patients included in the study

No		Clinical features	Number of patients
1.	Tumor stage	pT _{1a}	17(9.1%)
		pT _{1b}	27(14.5%)
		pT ₂	73(39.2%)
		pT ₃	63(33.9%)
		pT ₄	6(3.2%)
	Metastases to lymph nodes	Yes	76(40.9%)
		No	110(59.1%)
2.	Distant metastases	M ₀	169(90.9%)
		M ₁	17(9.1%)
2.	Stroma invasion:	≤1mm	29(15.6%)
		≥1mm	130(69.9%)
		No data	27(14.5%)
3.	Tumor gradation	1	22(11.8%)
		2	124(66.7%)
		3	40(21.5%)
4.	Lymphovascular invasion	Yes	18(9.7%)
		No	139(74.7%)
		No data	29(15.6%)
5.	Vascular invasion	Yes	27(14.5%)
		No	143(76.9%)
		No data	16(8.6%)
6.	Stage FIGO	I stage	69
		II stage	60
		III stage	36
		IV stage	21

Spread to the lymph nodes occurred first in the direction of the inguinal lymph nodes. In 32.8% of cases, metastases were diagnosed in regional, femoral and inguinal lymph nodes. Palpation of the inguinal region may reveal involvement of the lymph nodes, but histological findings are positive in only 40% of cases with palpable tumors. Of the 61 lymph nodes affected by metastases, 36(59%) of the cases were inflamed and fixed, in this case, although rare, adenopathy was a warning symptom. In a large number of cases, the nodes were palpated, often bilaterally, and were displaced.

Patients with a tumor limited only to the vulva or vulva and perineum, 2 cm or less in size in the largest dimension with invasion of the underlying tissues up to 1 mm, occurred in 26.3% of cases.

Isolated lesions of the pelvic lymph nodes are possible with the localization of the tumor in the clitoris and areas adjacent to the clitoris. Lymphovascular invasion was detected in 74.7% of patients, vascular in 76.9% of patients. In more than half, the tumor grade corresponded to G2.

More than 90% of vulvar cancer had a squamous histological form (VSCC – vulvar squamous cell car-

cinoma), in other cases, glandular, adenosquamous and other forms (Table 2).

Table 2. – Histological structure of vulvar cancer

Nº	Histological structure	Number of patients
1.	Bartholin gland carcinoma.	1 (0.5%)
2.	Warty carcinoma.	5 (2.7%)
3.	Squamous cell carcinoma.	109 (58.6%)
4.	Squamous intraepithelial neoplasia, Grade 3.	39 (20.9%)
5.	Basal cell carcinoma.	17 (9.1%)
6.	Adenocarcinoma.	9 (4.8%)
7.	Paget's disease.	4 (2.2%)
8.	Adenosquamous cell carcinoma	2 (1.1%)

Inguinal-femoral lymph node dissection. This type of operation is one of the most common types of lymphadenectomy used in oncological practice. In addition to tumors of the vulva, this operation is also performed for various tumors of the lower extremities, genital organs, and other localizations. The technique for performing this type of operation is well developed. In the traditional version, the operation is started with two semi-oval incisions from the anterior superior surface of the ilium, parallel to the inguinal fold, with a dissection of the skin and subcutaneous fat. The incision was completed near the tendon of the external oblique muscle of the abdomen. The skin and adipose tissue were separated from the aponeurosis of the external oblique muscle to the center of the Scarpov's triangle. Pupartov's ligament was transected, while the fascia of the oblique muscle was

removed. Gradually dissecting the tissue from the tubercle of the pubic bone to the top of the femoral triangle, a tissue block was isolated from the tissue and lymph nodes of the femoral triangle and femoral canal. The block was removed by crossing the legs.

The indication for lymph node dissection was a tumor located in the clitoral region, a tumor larger than 2 cm, invasion into the surrounding tissues of more than 5 mm, multifocal tumor growth, and poorly differentiated G-4 intraepithelial carcinoma.

Results. The operation was performed in 61(32.8%) patients (Table 3). Of the 61 patients, 23 patients underwent bilateral lymph node dissection, which accounted for 37.7% of the total number of patients with inguinal-femoral lymph node dissection. Thus, 84 operations were performed to remove lymph nodes from the regional pool.

Table 3. – Distribution of patients with vulvar cancer subjected to radical inguinal-femoral lymph node dissection

Nº	Clinical characteristics	HPV-27	HPV+34
1	2	3	4
1.	Stage FIGO		
	II stage	19(%)	14
	III stage	8(%)	13(%)
	IV stage		7(%)
2.	Tumor localization		
	Large labia	9(%)	11(%)
	Posterior commissure	3(%)	3(%)
	Periurethral zone	1(%)	2(%)

1	2	3	4
2.	Clitoris Several anatomical zones	2(%) 4(%) 8(%)	1(%) 8(%) 9(%)
3.	Histological type Squamous cell carcinoma. Squamous intraepithelial neoplasia, Grade 3 Adenocarcinoma	19 (%) 7 (%) 1 (%)	22 (%) 12 (%) –

35 of these (18.8%) patients underwent surgery in the standard, traditional technique, with a wide excision of the skin of the inguinal-femoral zone. In 26 patients (13.9%), the operation was performed using endoscopic technique. The operations were performed according to the standard technique, using equipment for endoscopic surgery manufactured by Karl Storz Endoscopie (Germany). When accessing the space of adipose tissue, a retractor for

subcutaneous endoscopic surgery Bird and Emory (Snowden Pericer, USA) was used.

The operation to remove the lymph nodes from the inguinal – femoral zone is not very difficult to perform. Despite the development of all aspects of this operation, in the postoperative period, as in other operations, complications were observed associated with the peculiarity of surgical aggression, the characteristics of the patient's body (Table 4).

Table 4. – Postoperative complications after inguinal-femoral lymph node dissection (n=84)

№	Postoperative complications	Number of cases
1.	Suppuration of the wound	17(20.2%)
2.	Divergence of seams	3(3.6%)
3.	Lymphostasis	9(10.7%)

The operation was performed in 61 (32.8%) patients (Table 4.8). Of the 61 patients, 23 patients underwent bilateral lymph node dissection, which accounted for 37.7% of the total number of patients with inguinal-femoral lymph node dissection. Thus, 84 operations were performed to remove lymph nodes from the regional basin.

When analyzing the long-term results of lymph node dissection, the following features were revealed: in patients with a poorly differentiated histological form of the tumor, with lesions of several

anatomical tumors, with lesions of the clitoris, in the presence of lymphovascular invasion in 7 (18.4%) of 38 patients who underwent unilateral lymph node dissection within the next 8 months after operations, metastases occurred in the opposite inguinal zone.

Conclusion. Thus, the indication for bilateral inguinal-femoral lymph node dissection should be, in addition to confirmed metastases in the inguinal region, a low-grade histological form of vulvar cancer, damage to several anatomical zones, lymphovascular invasion, and clitoris lesion.

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