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Metastases to the Supraclavicular Lymph Nodes in Cervical Cancer: Diagnostic and Treatment Options (Clinical Case)

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Introduction

Recurrence of cervical cancer occurs in 5-50% of cases depending on the stage of the disease, tumor histotype. Supraclavicular lymph nodes in cervical cancer are affected in 2% of cases, following in prevalence after para-aortic lymph nodes. Treatment strategies for these patients are limited to palliative therapy, but modern capabilities allow for effective and safe treatment. We present a clinical case - metastatic cervical cancer to the supraclavicular lymph nodes and lungs in stage I cervical cancer in a young patient [1].

Patient B., 30 years old, came to the Novosibirsk Regional Clinical Oncology Dispensary in 2018 with a diagnosis of cervical cancer, HPV type 16 based on the results of cervical conization. Pathomorphological concilium – CIN II.

14.05.2018. Cervical reconization was performed, histological analysis - microinvasive squamous cell carcinoma of the cervix with an invasion depth of 3 mm. Resection margins are negative [2].

A consultation with the participation of the Federal State Budgetary Institution "NMRC of Oncology named after N.N.Petrov of MoH of Russia" (St. Petersburg) and the Herzen's Moscow Oncology Research Institute (Moscow) - a diagnosis was made - Cervical cancer T1a1N0M0, dynamic observation is recommended [3].

MRI of the pelvic organs after 6 months - the appearance of a cervical formation with signs of minimal infiltration of the vaginal fornix, the appearance of a lymph node up to 1 cm in the left external iliac region. Biopsy of the cervix - squamous cell non-keratinizing cervical cancer. Performed: Laparotomy, radical total hysterectomy with left appendages, right fallopian tube. Pelvic lymphadenectomy. Transposition of the right ovary [4].

Histological Examination #45446-45479 dated 12/21/2018

Moderately differentiated squamous cell carcinoma without keratinization with invasion of 2/3 of the muscular layer, vascular invasion. Metastatic lesions of the lymph nodes on the right - in four out of seven, metastases in one of three lymph nodes on the left. There is no tumor growth along the resection line. The fallopian tubes are of normal structure. Corpus luteum cyst of the left ovary, simple cyst of the left ovary [5].

Change of Clinical Diagnosis - Postoperative Staging, The Final Clinical Diagnosis was Made:
Cervical Cancer Stage III $T_1N_1M_0$.

A course of chemoradiation therapy was performed at the Federal State Budgetary Institution "National Medical Research Center named after Academician E.N. Meshalkin".

According to the CT scan of the chest organs dated 09/07/2020 - Multiple focal changes in the lungs (more data for metastases)

According to the results of abdominal ultrasound, MRI of the pelvis - no relapse, no focal changes were detected [6].

A control CT scan of the chest organs on 10/12/2020 - multiple metastases to the lungs (3-37 * 17 mm) with a tendency to merge [7].

10/15/2020 - Puncture of the Left Supraclavicular Lymph Node:
Cytological result No. 8162-63 from 10/15/2020 - squamous cell carcinoma. (Figure 1)

Figure 1: Ultrasound signs of a metastatically altered supraclavicular lymph node.

10/16/2020 – Concilium - chemotherapy is indicated according to the scheme: Paclitaxel 175 mg / m2 intravenously by drip on day 1 + Cisplatin 75 mg / m2 intravenously by drip on day 1 + Bevacizumab 15 mg / kg intravenously by drip on day 1.

Cycle 1 time in 21 days, up to 6 courses with an assessment of the effect after the 3rd and 6th courses, in the absence of data on progression in the future, continuation of targeted therapy in monotherapy (Bevacizumab 15 mg / kg intravenously by drip 1 time in 21 days) until progression with an assessment of the effect every 3 months [8].

6 courses of chemotargeted therapy were administered (completed on 02.2021)
Then, according to the consultation, 6 courses of TT were administered (12 courses in total)
- Bevacizumab 990 mg intravenously by drip on day 1.

During the follow-up examination, according to the CT scan of the chest organs and ultrasound of the supraclavicular lymph nodes, the patient has progression of the disease (an increase in the size of single foci, the appearance of new single foci) On the left in the lower third of the neck, behind the sternocleidomastoid muscle, a hypoechoic lymph node of a heterogeneous structure due to hyperechoic inclusions is located, with clear, even contours measuring 13x9x11 mm, with single blood flow loci along the periphery during color Doppler imaging. A hypoechoic node measuring 5x2 mm is also located there.On the right, the lymph nodes of the neck are unchanged (in dynamics from 02.2021) - an increase in size.Concilium 07/01/2021 - the progression of the disease, the continued growth of metastatic foci in the lungs, supraclavicular lymph nodes, the patient is shown 2 lines of chemotherapy:

Gemcitabine 800 mg / m2 intravenously 30 minutes on the 1st, 8th, 15th days every 4 weeks up to 6 courses with an assessment of the dynamics after the 3rd course (ultrasound of the supraclavicular lymph nodes, CT of the chest organs) 2 courses of chemotherapy.

Progression, Growth of Lymph Nodes
Concilium 09/23/2021: Given the patient's age, tumor histotype, PD-L1> 1, treatment performed, disease progression against the background of chemotherapy, immunotherapy is indicated - Pembrolizumab 200 mg IV once every 21 days until progression or intolerable toxicity with an assessment of the effect every 3 months (CT scan of the chest organs, CT scan of the abdominal organs with contrast, MRI of the pelvis, ultrasound of the supraclavicular lymph nodes). According to the results of the follow-up examination dated 12/2021, there is progression of the disease due to the growth of cervical lymph nodes, intrathoracic lymph nodes, MTS in the lungs, the appearance of MTS in the liver. (Figure 2)

Figure 2: Metastatic Supraclavicular Lymph Nodes

Concilium 12/23/2021: Given the progression of the disease according to the follow-up examination, the following was recommended: Cisplatin 75 mg\m2 per day, 21-day cycle up to 6 courses with an assessment of the dynamics after 2-3 courses [9].

02/03/2022, The 3rd Course of Chemotherapy was Performed MSCT from 02/24/2022 - multiple mts foci of the lungs with a decrease in size (including along the pleura on the right) and transformation of some foci into areas of local fibrosis over time, - intrathoracic, supraclavicular lymphadenopathy with a decrease in size over time, - right-sided pleural effusion, traces of pleural effusion on the left, - multiple air cavities in the lungs (increase in the size of the largest), - single mts foci of the liver: decrease in the size of the lesion in SIVb; in SV previously was not clearly visualized against the background of minimally reduced parenchyma density). - a single enlarged para-aortic lymph node. (Figure 3)

Figure 3: Metastatic Supraclavicular Lymph Nodes on the Left, Positive Dynamics

Ultrasound of the lymph nodes of the neck from 02/24/2022 - on the left, numerous hypoechoic lymph nodes with clear, smooth contours up to 6 mm in size along the short axis are located [10].

On the right, the lymph nodes are unchanged. Subclavian lymph nodes: On the left, hypoechoic lymph nodes up to 3 mm in size along the short axis are located [11].

On the right, they are not located. On the left, in the lower third of the neck and supraclavicular region, a hypoechoic solid formation of a heterogeneous structure is located, cuff-like covering the supraclavicular vein, with unclear, uneven contours with approximate dimensions of 43x28x44 mm, with unexpressed blood flow during color Doppler imaging [12-16]. In the soft tissues of the lower third of the neck and supraclavicular region on the left, a similar formation measuring 53x41x62 mm. (Figure 4)

Figure 4: Metastatic Supraclavicular Lymph Nodes on the Left, Progression

Conclusion

The above observation shows:

1. The need to identify high-risk factors for disease progression (in this case, the patient's young age). It is necessary to develop mathematical models and standardized approaches to selecting patients for organ-preserving treatment.
2. It is necessary to prescribe immunotherapy drugs in the first line of therapy. In this case, a positive radiological effect was noted in the form of a decrease in the size of foci according to CT, but earlier administration of immunotherapy is possible to achieve a lasting clinical effect.
3. Frequent and long-term monitoring of patients with cervical cancer is necessary.

References

1. Kanao H, Aoki Y, Omi M, Nomura H, Tanigawa T, et al. (2021) Laparoscopic pelvic exenteration and laterally extended endopelvic resection for postradiation recurrent cervical carcinoma: Technical feasibility and short-term oncologic outcome. Gynecol Oncol 161: 34-38.
2. Kanao H, Aoki Y, Hisa T, Takeshima N (2018) Laparoscopic laterally extended endopelvic resection (LEER) for cervical carcinoma recurring at the pelvic sidewall after concurrent chemoradiotherapy: Our experience in three cases. Gynecol Oncol 149: 428-429.
3. Tran AQ, Sullivan SA, Gehrig PA, Soper JT, Boggess JF, et al. (2017) Robotic Radical Parametrectomy With Upper Vaginectomy and Pelvic Lymphadenectomy in Patients With Occult Cervical Carcinoma After Extrafascial Hysterectomy. J Minim Invasive Gynecol 24: 757-763.
4. Kamura Toshiharu, Ushijima Kimio (2013) Chemotherapy for advanced or recurrent cervical cancer. Taiwanese journal of obstetrics & gynecology 52: 161-164.
5. Scatchard K, Forrest JL, Flubacher M, Cornes P, Williams C (2012) Chemotherapy for metastatic and recurrent cervical cancer. Cochrane Database Syst Rev 10: CD006469.
6. Cohen AC, Roane BM, Leath CA 3rd (2020) Novel Therapeutics for Recurrent Cervical Cancer: Moving Towards Personalized Therapy. Drugs 80: 217-227.
7. Gadducci A, Cosio S (2020) Pharmacological Treatment of Patients with Metastatic, Recurrent or Persistent Cervical Cancer Not Amenable by Surgery or Radiotherapy: State of Art and Perspectives of Clinical Research. Cancers (Basel) 12: 2678.
8. Pardoll DM (2012) The blockade of immune checkpoints in cancer immunotherapy. Nature reviews. Cancer 12: 252-264.
9. Alldredge JK, Tewari KS (2016) Clinical Trials of Antiangiogenesis Therapy in Recurrent/Persistent and Metastatic Cervical Cancer. Oncologist 21: 576-585.
10. Park JY, Lim MC, S Y Lim, J M Bae, C.W. Yoo, et al. (2008) Port-site and liver metastases after laparoscopic pelvic and para-aortic lymph node dissection for surgical staging of locally advanced cervical cancer. Int J Gynecol Cancer 18: 176-180.
11. Ke GH, Huang X, Huang XW, Liu SP, Wu XH (2013) [Extended-field intensity modulated radiation therapy and intra-cavitary brachytherapy combined with chemotherapy for stage Ib1-IVa cervical cancer with positive para-aortic lymph nodes]. Zhonghua Fu Chan Ke Za Zhi. 48: 649-53.
12. Kim JY, Kim JY, Kim JH, Yoon MS, Kim J, et al. (2012) Curative chemoradiotherapy in patients with stage IVB cervical cancer presenting with paraortic and left supraclavicular lymph node metastases. Int J Radiat Oncol Biol Phys 84: 741-747.
13. Ki EY, Lee KH Park JS, Hur SY (2016) A Clinicopathological Review of Pulmonary Metastasis from Uterine Cervical Cancer. Cancer Res Treat 48: 266-272.
14. Clavero JM, Deschamps C. et al. Gynecologic cancers: factors affecting survival after pulmonary metastasectomy. Ann Thorac Surg. 2006 Jun;81(6):2004-7. doi: 10.1016/j.

athoracsur.2006.01.068. PMID: 16731120.

15. Yamamoto K, Yoshikawa H, Shiromizu K, Saito T, Kuzuya K, et al. (2004) Pulmonary metastasectomy for uterine cervical cancer: a multivariate analysis. Ann Thorac Surg 77: 1179-1182.
16. Yano T, Shoji F, Maehara Y (2009) Current status of pulmonary metastasectomy from primary epithelial tumors. Surg Today 39: 91-97.