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CLINICAL CASE REPORT

CLINICAL OBSERVATION OF PATIENTS WITH PRIMARY MULTIPLE MALIGNANT TUMORS, INCLUDING PRIMARY MULTIPLE MELANOMA

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ABSTRACT

Recently, there has been an increase in the number of patients with primary multiple malignant tumors, which not only affect one or more organs, but also differ in their histological structure. At the same time, melanoma of the skin is a rare localization among primary malignant neoplasms. This nosology accounts for only 3–5 % of all skin tumors. Melanoma is associated with high mortality due to the development of a pronounced metastatic potential, and therefore the study of this malignant formation is of the greatest relevance. Over the past 50 years, the incidence of multiple primary melanoma has increased significantly. At the same time, the number of patients with more than 2 lesions has increased to 18 % of the number of primary multiple melanomas over the past 50 years. This emphasizes the importance of monitoring patients with melanoma and regularly examining patients for new lesions. This article demonstrates a clinical case of a patient with a confirmed diagnosis of a primary multiple disease with melanoma of the skin and rectum. For skin melanoma, the patient underwent a wide excision of the tumor with inguinal-femoral lymph node dissection on the right. Subsequently, radiation therapy and chemotherapy were performed. Further, during a comprehensive examination, the patient was diagnosed with a malignant neoplasm of the lower ampullar rectum with a transition to the anal canal. The patient underwent laparoscopic-assisted abdominoperineal extirpation of the rectum. Histological analysis revealed nodular melanoma. From the anamnesis of the patient, among the comorbidities, breast cancer, uterine myoma, hemangioma of the liver and lung hamartoma were also identified. The clinical course of all malignant tumors was favorable, without the development of relapses and metastases. The greatest interest in this situation is the primary multiple melanoma in connection with successful treatment with the most unfavorable prognosis. The described clinical observation indicates the need for an in-depth study of cases of primary multiple malignant tumors and the search for mechanisms for a favorable course of malignant neoplasms in this case.

Keywords: primary multiple malignant tumors, primary multiple melanoma, melanoma of the skin

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КЛИНИЧЕСКОЕ НАБЛЮДЕНИЕ

КЛИНИЧЕСКОЕ НАБЛЮДЕНИЕ ПАЦИЕНТКИ С ПЕРВИЧНО-МНОЖЕСТВЕННЫМИ ЗЛОКАЧЕСТВЕННЫМИ ОПУХОЛЯМИ, ВКЛЮЧАЮЩИМИ ПЕРВИЧНО-МНОЖЕСТВЕННУЮ МЕЛАНОМУ

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РЕЗЮМЕ

В последнее время отмечается увеличение числа пациентов с первично-множественными злокачественными опухолями, которые не только поражают один или несколько органов, но и отличаются между собой по гистологической структуре. При этом среди первичных злокачественных новообразований редкой локализацией является меланома кожи. Данная нозология составляет всего 3–5 % от всех опухолей кожи. Меланома связана с высокой смертностью из-за развития выраженного метастатического потенциала, в связи с чем изучение данного злокачественного образования представляет наибольшую актуальность. За последние 50 лет встречаемость первично-множественной меланомы значительно возросла. При этом количество пациентов, имеющих более 2 очагов, возросло до 18 % от числа первично-множественных меланом в течение последних 50 лет. Это подчеркивает важность наблюдения пациентов с меланомой и регулярных осмотров больных на предмет возникновения новых очагов. В данной статье продемонстрирован клинический случай пациентки с установленным диагнозом первично-множественного заболевания с поражением меланомой кожи и прямой кишки. По поводу меланомы кожи пациентке было выполнено широкое иссечение опухоли с пахово-бедренной лимфодиссекцией справа. В последующем проводилась лучевая терапия и химиотерапия. В последующем при комплексном обследовании больной был установлен диагноз злокачественного новообразования нижне-ампулярного отдела прямой кишки с переходом на анальный канал. Пациентке была выполнена лапароскопически-ассистированная брюшно-промежностная экстирпация прямой кишки. По данным гистологического анализа выявлена узловая меланома. Из анамнеза больной среди сопутствующих заболеваний также были выявлены рак молочной железы, миома матки, гемангиома печени, гамартома легкого. Клиническое течение всех злокачественных опухолей было благоприятным, без развития рецидивов и метастазов. Наибольший интерес в данной ситуации представляет первично-множественная меланома в связи с успешным лечением при наиболее неблагоприятном прогнозе. Описанное клиническое наблюдение свидетельствует о необходимости углубленного изучения случаев первично-множественных злокачественных опухолей и поиска механизмов благоприятного течения при этом злокачественных новообразований.

Ключевые слова: первично-множественные злокачественные опухоли, первично-множественная меланома, меланома кожи

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Соблюдение этических стандартов: в работе соблюдались этические принципы, предъявляемые Хельсинкской декларацией Всемирной медицинской ассоциации (World Medical Association Declaration of Helsinki, 1964, ред. 2013). Информированное согласие получено от всех участников исследования.

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INTRODUCTION

Recently, there has been an increase in the number of patients with primary multiple malignant tumors having different histological structure and affecting one or more organs. The cases of two primary malignant neoplasms are the most common, while the cases of a greater multiplicity of malignant tumors are less than 0.5 % [1-3].

At the same time, among primary malignant tumors, a rare localization is skin melanoma, which accounts for only 3-5 % of all skin tumors, but the relevance of this disease is due to high mortality due to pronounced metastatic potential [4].

Primary multiple melanoma is understood as the occurrence of two or more separate melanomas in one patient. Over the past 50 years, the incidence of primary multiple melanoma has increased significantly (in the 1960s, its rate was less than 1 % among men and women; in the 2000s – 6.4 % among women and 7.9 % among men). The number of patients with more than 2 lesions over the past 50 years has increased to 18 % of the number of primary multiple melanomas [5].

According to a study by Menzies S et al. (2017), 4.8 % of all melanomas are primarily multiple, and the average period between the detection of the first and second foci is 33.7 months. At the same time, in 70 % of patients, the second focus is diagnosed within about 2 years after the first one is detected [6]. This underlines the importance of monitoring patients with melanoma and regular examinations for the appearance of new foci. Among the most frequent localizations, the authors note the lesion of the lower lip. There was no significant difference in the age of patients with solitary and multiple melanomas. According to other authors, 1–8 % of all melanomas are primarily multiple [7]. About 6–12 % of all melanomas are familial and 12 % of familial melanomas are primarily multiple [8]. Risk factors for hereditary and primary multiple forms include mutations of the breast cancer 1 (BRCA1), BRCA1-associated protein 1 (BAP1), CDKN2A and telomerase reverse transcriptase (TERT) genes [9-10]. Despite the available information about melanoma, there is no significant data on the management of patients with primary multiple melanoma to date.

The purpose of the study is to improve the diagnosis and treatment results of primary multiple malignant neoplasms by applying careful dynamic monitoring of oncological patients.

Description of the clinical case

As the matter of information above, the following clinical observation is of interest.

Patient S., female, 64 years old, in September 2021, was admitted to the National Medical Research Centre for Oncology with complaints of an admixture of blood and mucus in the feces, pain during defecation, general weakness for 3 months. Fibrocolonoscopy was performed at the patient's place of residence, during which a tumor of the anal canal was detected, a biopsy was taken. According to the results of histological examination of the biopsy G2 squamous cell carcinoma has been confirmed.

It is known from the anamnesis that in 1990 the patient received treatment for melanoma of the skin of the right thigh (the stage of the disease is not known due to the loss of discharge documents). The patient underwent a wide excision of the tumor with inguinal-femoral lymph dissection on the right, radiation therapy and chemotherapy were performed. In 1991, for the second stage of right breast cancer (pT2N0M0), the patient underwent combined treatment, including remote gamma therapy and radical mastectomy. In 2001, supravaginal amputation of the uterus with appendages was performed due to uterine fibroids of the patient.

The patient's closest relatives have no oncological diseases.

A follow-up examination of the patient was conducted at the National Medical Research Centre for Oncology. A revision of histopreparations and IHC No. 11832-33/21 was performed: in biopsies of rectal tumors, the morphological picture and immunophenotype of tumor cells (S-100+, Vimentin +, panCK-) correspond to pigmented melanoma.

With spiral computed tomography (CT) of the chest and abdominal organs, focal formation of the middle lobe of the right lung of tumor genesis and hemangioma of the right lobe of the liver were revealed.

During magnetic resonance imaging (MRI) of the pelvic organs, a semicircular tumor involving the mucous and submucosal layer without signs of damage to the condyle subserous and serous layers with exophytic growth and narrowing of the rectum to 2/3 of

its lumen is determined by 25 mm from the anodermal junction in the anal canal and by continuation in the lower ampullary section. MR-signs of extramural growth, invasion of mesorectal tissue, mts lesions of lymphatic collectors in the pelvic and retroperitoneal tissues were not detected.

According to the results of a comprehensive examination, the patient was diagnosed with malignant neoplasm (MN) of the lower ampullary rectum with a transition to the anal canal T3N0M0, art. II, clinical group 2.

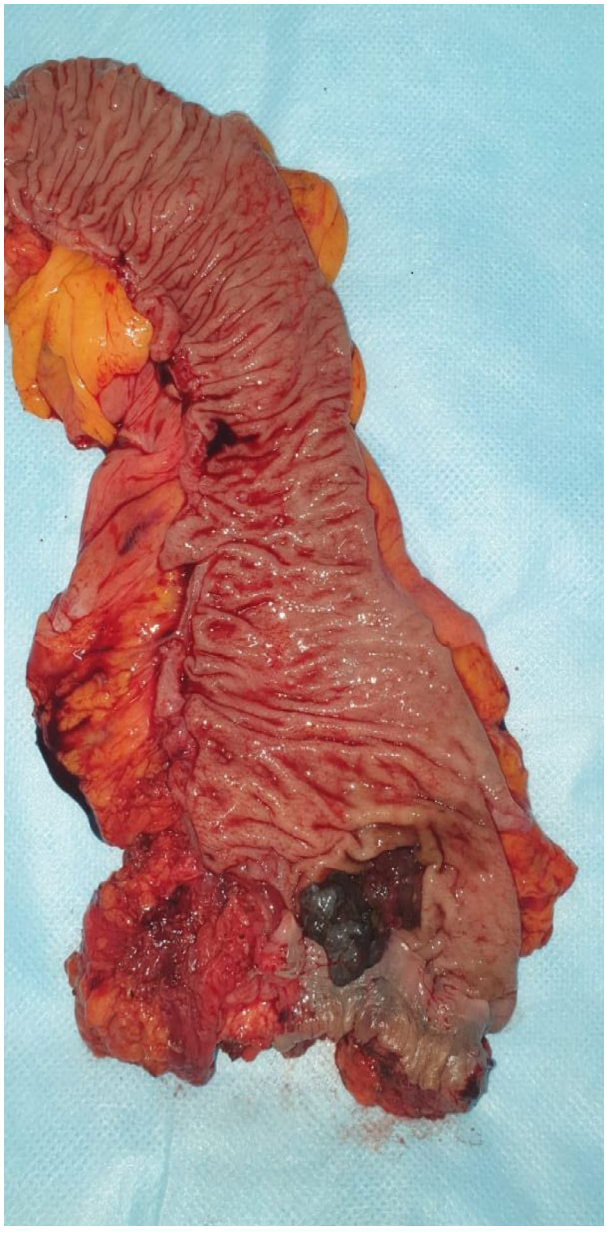

Fig. 1. Postoperative tissue with rectal melanoma.

laparoscopically assisted abdominal-perineal extirpation of the rectum was performed on 09/13/2021. The postoperative preparation is shown in figure 1.

Postoperative pathomorphological examination No. 98743-60/21: nodular melanoma of the lower ampullary rectum with a transition to the anal canal, with ulceration, fusiform and epithelioid cell variants of the structure, with a high content of unevenly distributed brown pigment, with pronounced lymphocytic infiltration along the periphery of the tumor, with invasion to the muscular membrane, with a Breslow thickness of 7 mm. There is sinus histiocytosis in 2 lymph nodes; 10 fragments are represented by fatty tissue with dilated full-blooded blood vessels. There were no signs of tumor growth along the resection lines.

No V600 mutation in exon 15 of the BRAF gene was detected during the DNA study

The postoperative period proceeded without complications.

On 10/27/2021, a videothoracoscopic atypical resection of the middle lobe of the right lung was performed. Postoperative pathomorphological examination No. 118321-23/21: morphological picture of pulmonary (chondoromatous) hamartoma.

With further follow-up and control examination every 3 months, no data for the progression of the disease was revealed.

DISCUSSION

Thus, one patient had six tumor locations: three of them benign (uterine fibroids, liver hemangioma, lung hamartoma) and three malignant (skin melanoma, breast cancer, rectal melanoma). The clinical course of all malignant tumors was favorable, without the development of relapses and metastases. Primary multiple melanoma is of the greatest interest in this observation due to successful treatment with the most unfavorable prognosis.

CONCLUSION

The described clinical observation indicates the need for an profound study of cases of primary multiple malignant tumors and the search for mechanisms of a favorable course of malignant neoplasms in this case.

References

1. Soldatkina NV, Kit OI, Gevorkyan YuA, Milakin AG. Multiple primary colorectal cancer: clinical aspects. Therapeutic Archive. 2016;88(8):53–58. (In Russ.). https://doi.org/10.17116/terarkh201688853-58, EDN: WKGCEF
2. Kit OI, Gevorkyan YuA, Soldatkina NV, Kharagezov DA, Kolesnikov VE, Milakin AG. Multiple primary colorectal cancer: the possibilities of minimally invasive surgical interventions. Koloproktologia. 2017;(1):38–42. (In Russ.). https://doi.org/10.33878/2073-7556-2017-0-1-38-42, EDN: XVGRMP
3. Ilcheva M, Nikolova P, Hadzhiyska V, Mladenov K. Impact of FDG PET/CT on detection of synchronous and metachronous malignancies and clinical management in patients with multiple primary cancers. Neoplasma. 2022 Jul;69(4):948–956. https://doi.org/10.4149/neo_2022_220203N135
4. Van Geel AN, den Bakker MA, Kirkels W, Horenblas S, Kroon BBR, de Wilt JHW, et al. Prognosis of primary mucosal penile melanoma: a series of 19 Dutch patients and 47 patients from the literature. Urology. 2007 Jul;70(1):143–147. https://doi.org/10.1016/j.urology.2007.03.039
5. Helgadottir H, Isaksson K, Fritz I, Ingvar C, Lapins J, Höiom V, et al. Multiple Primary Melanoma Incidence Trends Over Five Decades: A Nationwide Population-Based Study. J Natl Cancer Inst. 2021 Mar 1;113(3):318–328. https://doi.org/10.1093/jnci/djaa088
6. Menzies S, Barry R, Ormond P. Multiple primary melanoma: a single centre retrospective review. Melanoma Res. 2017 Dec;27(6):638–640. https://doi.org/10.1097/CMR.0000000000000395
7. Rastrelli M, Tropea S, Rossi CR, Alaibac M. Melanoma: epidemiology, risk factors, pathogenesis, diagnosis and classification. In Vivo. 2014;28(6):1005–1011.
8. Conrad N, Leis P, Orengo I, Medrano EE, Hayes TG, Baer S, et al. Multiple primary melanoma. Dermatol Surg. 1999 Jul;25(7):576–581. https://doi.org/10.1046/j.1524-4725.1999.98050.x
9. DE Simone P, Valiante M, Silipo V. Familial melanoma and multiple primary melanoma. G Ital Dermatol Venereol. 2017 Jun;152(3):262–265. https://doi.org/10.23736/S0392-0488.17.05554-7
10. Soura E, Eliades PJ, Shannon K, Stratigos AJ, Tsao H. Hereditary melanoma: Update on syndromes and management: Genetics of familial atypical multiple mole melanoma syndrome. J Am Acad Dermatol. 2016 Mar;74(3):395–407. https://doi.org/10.1016/j.jaad.2015.08.038

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Contribution of the authors:

Gevorkyan Yu. A. – performed scientific editing, conceived and designed the study concept;

Soldatkina N. V. – performed scientific editing and preparations, conceived and designed the study concept;

Bondarenko O. K. – performed data collection, took the lead in analysis and interpretation, material processing;

Mironenko I. N. – worked out paper design;

Kolesnikov V. E. – performed data collection, took the lead in analysis and interpretation;

Dashkov A. V. – performed material processing.