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SURGICAL TREATMENT OF PRIMARY NON-PIGMENTED COLON MELANOMA: A CASE REPORT

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Primary colonic melanoma is a rare malignant tumor with an aggressive course and a poor prognosis. The extremely low incidence of this pathology is due to the fact that there are no melanocytes in the mucosa of the gastrointestinal tract, from which the tumor develops. The development of non-pigmented melanoma are even rarer. Due to the lack of clinical guidelines for the treatment of primary colonic melanoma, therapy is mainly carried out empirically. The article describes a clinical case that demonstrates the possibilities of surgical treatment of primary non-pigmented melanoma of the colon with satisfactory oncological results.

Keywords: primary non-pigment melanoma, colon, surgical treatment.

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Introduction. Melanoma is an aggressive tumor that develops as a result of malignant transformation of melanocytes. The main localization of melanoma is the skin, but there are reports of primary melanoma of various organs [1]. According to the American College of Surgeons and the American Society of Oncology, during the period from 1985 to 1994, out of 84836 cases of melanoma, the most common lesions were skin - 91.2%, eyes - 5.2%, mucous membrane of the gastrointestinal tract (GIT) - 1.3%, in some cases, the primary localization of the tumor was not verified - 2.2% [2].

Primary melanoma of the gastrointestinal tract is an extremely rare malignant disease [3], for the reason that normally in the mucous of the digestive tract there are no melanocytes and they appear only when ontogenesis is disturbed. Currently, there are several theories about the appearance of melanocytes in the colon: some authors believe that primary intestinal melanomas arises from melanoblastic cells of the neural crests, which migrate to the distal ileum through the omphalomesenteric canal [4], according to the others, these tumors develops from cells of the APUD system [5], either from neuroblastic Schwann cells of the enteric autonomic nervous system [6]. At the same time, a number of researchers believe that primary colon melanoma does not exist, and all founded cases are only metastatic foci from primary skin melanoma, which is asymptomatic or in remission [7, 8]. In this regard, the question of the primary or metastatic origin of melanomas of the gastrointestinal tract is still open.

According to the world literature, 36 cases of primary colon melanoma were described in 2018 [3]. Cases of non-pigmented melanoma of the gastrointestinal tract are even rarer [9], which makes it more relevant for studying. In the presented article, we will consider a clinical case about surgical treatment of a patient with primary non-pigmented melanoma of the transverse colon.

Patient T., aged 60, applied to the Oncology Research Institute of the Tomsk National Research Medical Center in July 2021 with complaints of recurrent pain in the mesogastric region. Examination during videocolonoscopy (July 08, 2021) revealed an exophytic tumor in the lumen of the transverse colon, narrowing the lumen of the intestine to a slit-like one (Fig. 1). Histological examination revealed an undifferentiated tumor of the epithelioid cell type with solid structure.

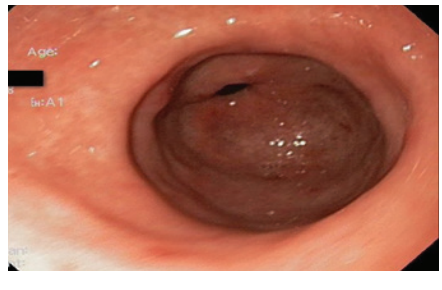

Fig. 1. Colonoscopy finding. Exophytic tumor in transverse colon

Fig. 2. Gross photograph. Tumor of the transverse colon

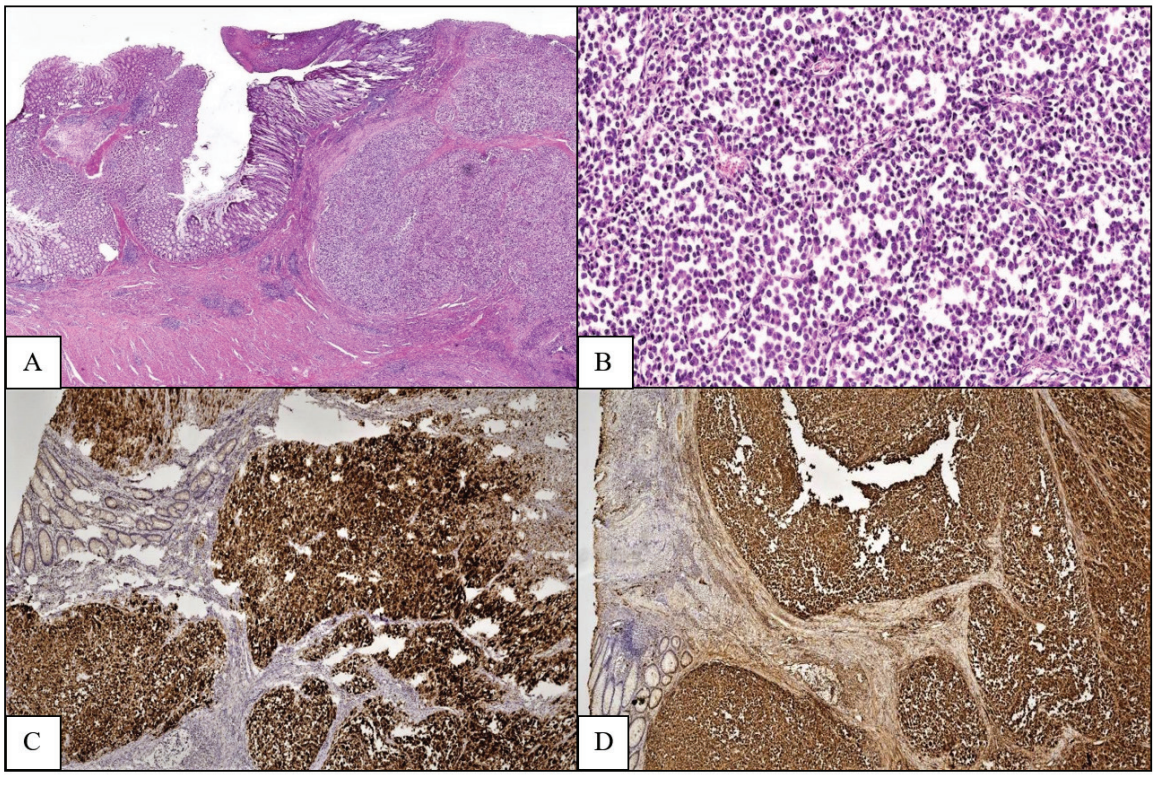

Fig. 3. Microscopy. A) The growth of a tumor of a solid structure in the intestinal wall (Magnification × 20, hematoxylin-eosin) B) Medium-sized tumor cells with a clear even cytoplasmic membrane, sparse homogeneous eosinophilic cytoplasm and large moderately polymorphic nuclei with unevenly distributed clumpy and pulverized chromatin. (Magnification × 80, hematoxylin-eosin). An IHC study in tumor cells revealed an active diffuse expression of Melan A (C) and S100 (D)

On August 24, 2021, after the standard preoperative preparation, the patient underwent video-assisted resection of the transverse colon with D3 lymph node dissection. Pathological examination of the colon resection specimen revealed exophytic component up to 5 cm in diameter, obturating the intestinal lumen with lymph nodes in the mesentery of the intestine up to 1.5–2 cm in diameter (Fig. 2). In the postoperative period there were signs of dynamic intestinal obstruction, that were treated by conservative therapy.

According to postoperative histological and immunohistochemical (IHC) studies (Fig. 3) we found out malignant non-pigmented melanoma of the transverse colon with ulceration of the mucous membrane and spread to 1/3 of the muscular plate. Tumor emboli in the lumen of the vessels and signs of neural invasion were not found. There were no tumor cells along the resection borders and in 25 examined lymph nodes.

In the postoperative period, a detailed clinical examination and a comprehensive examination showed no signs of tumor lesions of the skin and eyes, as well as the brain, skeleton and parenchymal organs. Thus, based on the results obtained, the final clinical diagnosis was formed: Pigmentless melanoma of the transverse colon, subcompensated stenosis. Stage I, T2N0M0. Condition after video-assisted resection of the transverse colon (August 24, 2021). Considering the stage of the tumor process and the radical nature of the operation performed, adjuvant treatment was not performed. On the 7th day after surgery, the patient was discharged from the hospital. At the control examination after 6 months (February 2022), there were no signs of disease progression.

Discussion. Nowdays, the diagnosis and treatment of melanoma of the colon present definite difficulties, which is caused with the low cases of incidence and underexplored of this pathology. The leading role in the diagnosis of primary melanoma of the colon is assigned to the IHC study (positive result for protein S100, melan-A, HMB-45 and vimentin), if there are no specific lesion of the skin or eyes in patients history or in present, which account for up to 96.4% of all cases of melanoma [2].

Currently, there are no clinical guidelines for the treatment of primary colonic melanoma. The main method of treatment is surgical, which, in addition to removing the tumor, allows for adequate staging and to develop further treatment tactics. Radiotherapy in some cases can provide good local control, but does not lead to an improvement in patient survival. [1].

It is known that patients with primary colonic melanoma with a widespread primary tumor and lymph node involvement have a poor prognosis [2]. This situation requires an interdisciplinary approach to treatment, including surgery, chemotherapy and possibly immunotherapy using modern anticancer drugs. [3, 10].

Conclusion. This clinical observation demonstrates the possibilities of surgical treatment in a patient with primary non-pigmented melanoma of the transverse colon (T2N0M0).

Due to the fact that primary melanoma of the colon is a rare pathology, the diagnosis is established on the basis of the IHC study, as well as the results of a comprehensive examination aimed at excluding the metastatic nature of the gastrointestinal tract (lack of data on melanoma of the skin and organs of vision). In the case of a localized tumor process, radical resections are performed, however, with locally advanced melanoma of the colon, especially with regional lymph nodes involved, a combination of surgical treatment with chemotherapy and/or immunotherapy is indicated.

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DETERMINATION OF NASAL SEPTUM DEVELOPMENT PATTERNS IN INDIGENOUS CHILDREN AGED 0 TO 4 IN THE REPUBLIC SAKHA (YAKUTIA)

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Dynamics in the development of otorhinolaryngological pathologies among Sakha Republic's population has a positive upward trend, and one of the main reasons is the deformity of the nasal septum, which, according to some authors, makes up 56 to 95% of all treatment cases. Congenital deformities or developmental anomalies leading to deviation of the nasal septum in children with untimely diagnosis can lead to chronic inflammatory processes in the mucous membrane of the cavity and paranasal sinuses. This causes a violation of the airway function of the upper respiratory tract and increased probability of infectious diseases. Diagnosis of these conditions in children under 6 years of age will prevent these consequences, as well as reduce the need for surgical treatment of septoplasty. This article discusses a method for describing the developmental patterns of the nasal septum as one of the practical methods for early diagnosis of children. The method uses computed tomography data of children of the indigenous population of the Sakha (Yakutia) Republic. We have analyzed the results of studies of multislice CT of the head in multiplanar mode for children aged 0 to 4 with a total of 48 patients. At the same time, the grouping of research subjects was based on gender (boys, girls) and age (by years). While analyzing the images, we used the linear dimensions of the nasal septum, including the length and height of the septum, as well as its angle of deviation. According to the results of the analysis, we found statistically significant correlations, which made it possible to conclude that there is a linear relationship between age groups and each of the indicators, as well as a decrease in the deviation angle of the nasal septum with age.

Keywords: developmental patterns; nasal septum; CT scan; anatomy; indigenous people; deviated nasal septum.

Introduction. The nasal septum is located on the facial region of the head in the middle part of the nasal cavity. It separates the two nasal passages and forms a scaffold to support the external nose. This structure has a mosaic developmental pattern and consists of bony structures, such as the perpendicular plate of the ethmoid bone above, the vomer below, and the tetrahedral cartilage in front. It develops from three main embryological sources: ectoderm, neural crest and mesoderm, which, by the end of the fourth week of gestation, form paired thickenings of the ectoderm in the embryo, forming the nasal cavity and its structures. [1, 2, 3, 4, 9, 11].

Deviations in the development of the nasal septum in the embryonic and postembryonic periods entail an increased risk of otorhinolaryngological pathologies and cause a violation of the nasal airway function [2, 7, 8, 9, 11, 13]. Conditions arise where the biomechanical aspects of air going through the nasal passages worsen. This leads to — in children in particular — chronic hypoxic conditions, an increase in the development of infectious diseases of the upper respiratory tract, impaired olfactory function, and speech problems. These also include the common pathology of deviation, or curvature, of the nasal septum. With untimely diagnosis of this disorder, there may be violation in the circulation of the nasal discharge from the paranasal sinuses, which leads to a favorable environment for infectious agents and the development of sinuses inflammation (e.g., sinusitis, ethmoiditis, frontal sinusitis). Inflammation of the nasal mucosa can also cause chronic rhinitis, the development of polyps, and sleep apnea [4, 11].

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