



MALIGNANT MELANOMA – METASTASES IN GIT: REPORT OF 4 CASES AND LITERATURE REVIEW

Vasil Bozhkov, Plamen Chernopolsky,
Second Department of Surgery, University Hospital St. Marina, Medical University - Varna, Bulgaria.

ABSTRACT:

Melanoma is a malignant skin tumor that originates from melanocytes. It occurs after a DNA mutation, most often due to excessive sun exposure. Clinically, it is characterized by irregular shape, color variability and asymmetry. Sometimes, it exhibits ulceration and bleeding, which are associated with a worse prognosis. Malignant melanoma is the most common neoplasm that metastasizes in the gastrointestinal tract, followed by breast and lung cancer. The small intestine is the most common metastatic location of melanoma in the GIT.

Purpose: We present four cases of malignant melanoma metastases in GIT. The symptoms which led to the hospitalization of the patients were ileus in two cases, hematemesis and hematochezia.

Results: We performed operative treatment - small intestinal resection because of intussusception followed by anastomosis in three patients and in one patient, liver resection and bitruncular sigmoidostomy. The histopathology revealed metastases for malignant melanoma. All of the patients had previous operation for a skin form of malignant melanoma, and chemotherapy or immunotherapy was performed. The patients had a postoperative period without complications.

Conclusions: Malignant melanoma is a widely common disease. It is the third neoplastic diseases which give metastases in the small intestine. Malignant melanoma metastases in the GIT are initially asymptomatic, but in time, they manifest with clinical presentation of ileus or bleeding from the GI tract.

Keywords: malignant melanoma, metastases, ileus, intussusception, immunotherapy

INTRODUCTION:

Malignant melanoma is the most common neoplasm that metastasizes to the gastrointestinal tract, followed by breast and lung cancer. [1] The small intestine is the most common metastatic localization of melanoma in GIT. [2] This is due to the high expression of the chemokine ligand CCR9 in the small intestine, which stimulate the

transmigration and targeting of melanoma tumor cells known with significant surface expression of the chemokine receptor CCR9. [3]

MATERIAL AND METHODS:

We report 4 cases of malignant melanoma metastasized in the GIT, operated in the Second Department of Surgery of the University Hospital of Varna for the period from 01.11.2021 until 01.02.2023, two males and two females. The symptoms that led to hospitalization were ileus, hematemesis and hematochezia. Three of the patients had a past medical history of melanoma, the fourth had the clinical and imaging findings for rectal tumor with liver metastases. In three patients, a CT scan was performed, one - had a PET – CT. table 1

Table 1. Imaging procedures and diagnosis of the patients. (figures 1a, b, c, d.)

Fig. 1a. Intussusception

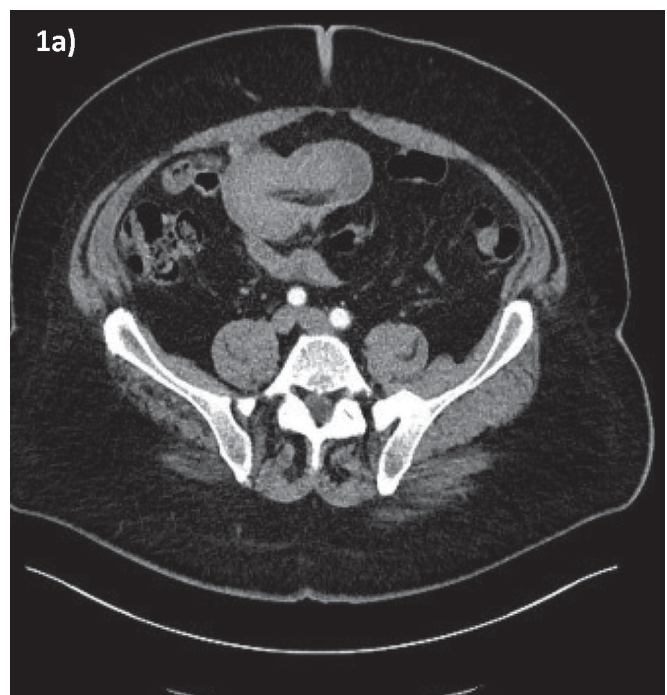


Fig. 1b. Rectal tumor

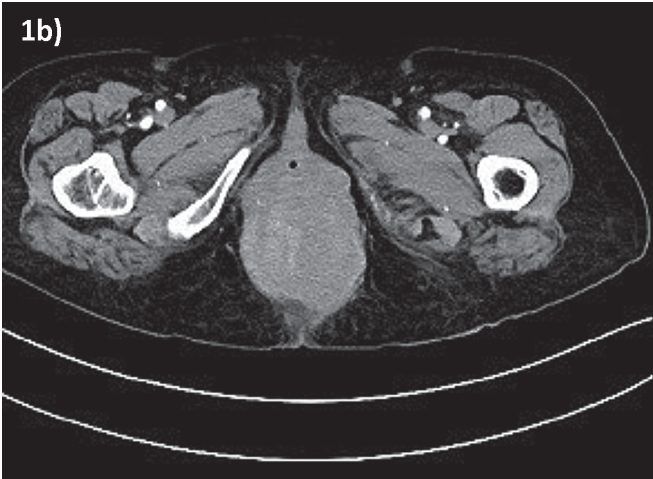


Fig. 1c. Liver metastases



Fig. 1d. Liver metastases



from the rectum. According to the pathology of the small intestine, resection and primary anastomosis were performed, and bitruncular sigmoidostomy and liver biopsy of the patient with hematochezia are shown in Table 2.

Table 2. Intraoperative findings. (figures 2a, b, c.)

Fig. 2a. Intussusception

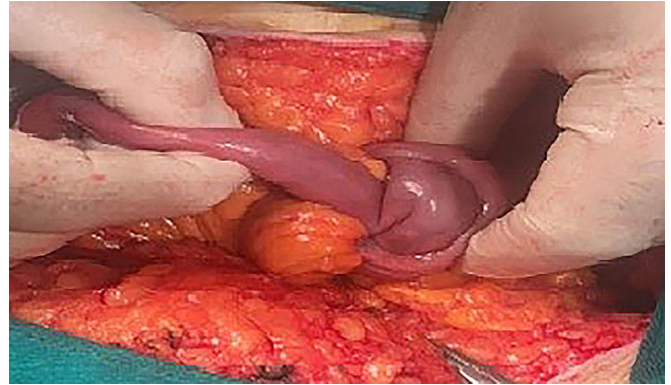


Fig. 2b. Tumor

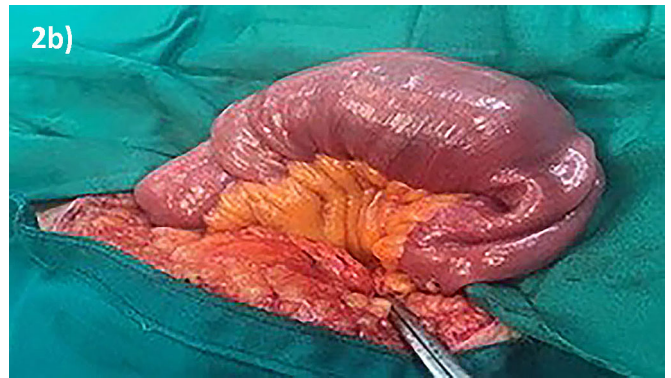


Fig. 2c. Tumor



RESULTS
All the patients were operated in an emergency because of clinical presentation of ileus and bleeding.

Three of them had had with small intestinal ileus due to intussusception, and one of them had bleeding

A histopathological examination of the specimens showed different aspects of melanoma cells Table 3.

Table 3. Microscopy of the specimens. (figures 3a, b, c.)

Fig. 3a. Melanoma cells enveloping small intestinal villi (H&E, x40)

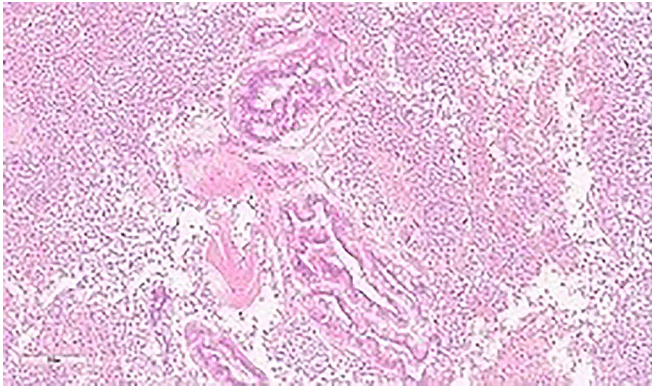


Fig. 3b. Pleomorphic tumor cells, showing rhabdoid features (peripheral nucleus and abundant intensely eosinophilic cytoplasm) (H&E, x400).

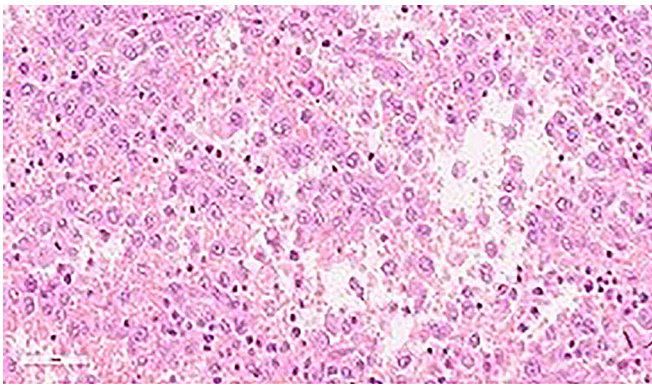
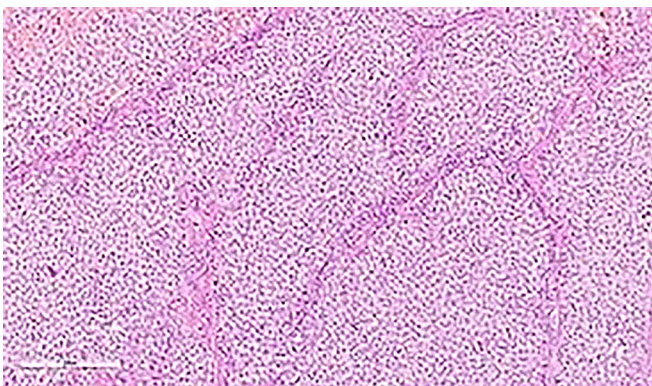


Fig. 3c. Alveolar tumor growth with lymphocyte stroma (H&E, x200)



DISCUSSION:

Malignant melanoma is an epithelial cancer arising from melanocytes that can be found in a number of tissue types, including the eye, oral cavity, nasopharynx, anus, urinary tract, vagina, but most commonly occurs in the

skin. [4, 5] Metastatic melanoma mostly has a fatal prognosis as the 5-year overall survival rate drops to 23% in stage IV patients. [6, 7] Usually, they present with metastases in the liver. [8] Primary melanoma of the small intestine is rare and remains a controversial diagnosis because it may be a metastasis from an unidentified or regressed primary cutaneous melanoma. [9] The metastases originate from skin or ocular forms of melanomas and, in most cases, metastasize to the small bowel. [8] The period of time between the diagnosis of primary malignant melanoma and the metastases in GIT varies between 2 and 180 months. [10] Melanoma lesions, in most cases, are asymptomatic but can lead to a spectrum of symptoms, which include nausea, vomiting, abdominal pain, weight loss, obstruction, perforation, and gastrointestinal bleeding. Chronic iron deficiency anemia may be the first signal for the presence of metastasis from malignant melanoma in the GIT. [11] The ultrasound (US) of the abdomen is the first diagnostic procedure for patients with nonspecific abdominal symptoms, but it is not sufficient to make a diagnosis of a metastatic lesion in the gastrointestinal tract. [12, 13] In all of our patients, we applied CT of the abdomen, which showed the cause of the abdominal symptoms and can verify if there are lesions suspicious for metastatic-lymph nodes or liver lesions. The combination of past medical history of malignant melanoma, symptoms and imaging findings can give us the diagnosis – metastatic malignant melanoma in GIT.

The patients with malignant melanoma are classified according to the TNM classification into those with local disease (stage I–II), those with lymph node involvement (stage III), and those with advanced/metastatic disease (stage IV). [14] In 2017, the American Joint Committee on Cancer (AJCC) introduced the 8th edition of the metastatic melanoma staging system. It includes 4 subcategories according to the location of the metastases. Leung et al. report that the GIT is involved from metastases only in 2-4% of the patients, but autopsy shows that 50% died from metastatic melanoma. [15,16]

In the biggest part of the cases, the metastases in GIT are asymptomatic or with unclear clinical presentation, similar to inflammatory bowel diseases. Leung et al. reported that abdominal pain is the leading complaint in 29-55% of the cases, followed by obstruction -27%, bleeding – 27%, palpable mass – 12 % and weight loss in 9% of the cases. [15]

The most common organs in the abdominal cavity which can be involved in metastatic melanoma are the small intestine (75%), colon 25%, liver (15-25%) and stomach (16%). [15]

Intestinal metastases from malignant melanoma are associated with a poor prognosis, and these patients have a median survival of 6-10 months after surgery. [17, 18] The patients with liver metastases should be strictly se-

lected when complete resection can be performed [19]

The surgical treatment as the only method that led to the control of chronic anemia associated with bleeding from intestinal metastases of malignant melanoma and the elimination of episodes of intestinal obstruction. Surgery for melanoma metastases can ensure increased survival in addition to improving the quality of life in these patients. [10, 20, 21]

CONCLUSION

Malignant melanoma metastases in the GIT are initially asymptomatic, but in time, they manifest with clinical presentation of ileus or bleeding from the GI tract. The CT scan can be defined as the gold standard in the diagnosis of secondary lesions in the abdomen. The surgical treatment is the only method which eliminates the source of bleeding or ileus and increases the survival rate in patients with malignant melanoma metastatic lesions of GIT.

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Address for correspondence:

Assoc. Prof. Dr Vasil Bozhkov, MD, PhD, DSc
Second Department of Surgery, University Hospital "St. Marina", Varna;
1, Hr. Smirnenski" Blvd., Varna 9010, Bulgaria.
E-mail: bojkov7@gmail.com,