

Three Different Presentations of Metastatic Gastric Melanoma

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1. Abstract

Melanoma is the most common metastatic tumor of the gastrointestinal (GI) tract and its diagnosis is rare during life since its symptoms are non-specific. The endoscopic gastric metastases appearance is heterogenous with no typical pattern. We report a patient who presented three different morphologies of metastatic gastric melanoma although the patient remained asymptomatic. This finding shows the importance of early upper digestive endoscopy in patients diagnosed with melanoma even in the absence of gastrointestinal symptoms.

2. Introduction

Melanoma is the most common metastatic tumor of the gastrointestinal (GI) tract [1] and the sites most commonly involved are the jejunum and ileum, followed by the colon, rectum, and stomach [2]. Metastatic melanoma of the stomach is a relatively rare entity of unusual diagnosis during life [3]. That occurs especially because patients remain asymptomatic until the disease progresses to an advanced stage [4]. In general, the symptoms of gastrointestinal involvement are non-specific, such as anemia, abdominal pain, nausea, occult digestive bleeding, abdominal mass, and weight loss [5, 6, 7]. The disease has a very poor prognosis, with an average survival rate of 4 - 6 months [8, 9].

The diagnosis of melanoma of the stomach is often difficult, and differentiating metastatic from primary melanoma may be hard [9] due to the various forms of presentation of the pathology.

Three main morphological types of gastric metastases are described in the literature. First, there are melanotic nodules, often ulcerated, which is the most frequent endoscopic feature. Second, there are ulcerated submucosal tumor masses. Another morphological type is a mass lesion with variable incidence of necrosis and melanosis [1,

10]. Although these are the most common forms of presentation, metastatic gastric melanoma may also appear as a simple ulcer or polypoid lesions [9]. These lesions are often pigmented but they may also be non-pigmented, mimicking other forms of neoplastic epithelial lesions [9, 11]. Regarding the anatomical location of gastric metastases, most are described in the body, fundus, and in the greater curvature, with lesions in the lesser curvature being uncommon [12, 13].

3. Case Presentation

We present the case of a 64-year-old female patient with no family history for cancer. The patient was diagnosed in 2018 with acral lentiginous melanoma on the plantar surface of the right foot and underwent staging with computed tomography which showed no other sites of the disease. The resection of the melanoma was made at that time and the margins of the resection were negative, then the patient was followed up by a general practitioner. In 2020, a positron emission tomography (PET-CT) demonstrated hypermetabolic activity in the lungs and stomach despite the patient claiming to be with no symptoms. Initial laboratory work-up revealed anemia (hemoglobin of 11,7 g/dl and hematocrit of 35,5), liver function tests, coagulation profile and basic metabolic panel were unremarkable. The physical exam was benign otherwise. An esophagogastroduodenoscopy (EGD) was performed, which confirmed findings in the gastric topography, showing lesions of different aspects. First, multiple hyperpigmented lesions distributed in the gastric fundus and the second duodenal portion (Figure 1 and 2). The second presentation found was a vegetating lesion with involvement by fungus in the anterior wall of the gastric body (Figure 3). And finally, although lesions in small curvature are uncommon, a vegeto-infiltrative lesion was found in this topography (Figure 4).



Figure 1: Flat blackened lesions on gastric fundus.



Figure 2: Flat blackened lesions in the second duodenal portion.



Figure 3: Vegetating lesion in the anterior wall of the gastric body.



Figure 4: Small curvature vegetative-infiltrative lesion.

The histological examination of the biopsies was taken and the immunostains showed that the neoplastic cells were positive for S-100 and HMB45 which confirmed the diagnosis of metastases from malignant melanoma. The disease was presented in three distinct morphological aspects, a finding that has been rarely described in the literature. The patient who was already in palliative care, was referred to the Clinical Oncology Support Center for follow-up and to discuss therapeutic options. As a result of the absence of gastrointestinal symptoms and suspicion for diffuse metastatic disease to the lungs, she was not considered a candidate for surgical resection.

4. Discussion

It takes about 43 months from the diagnosis of a primary cutaneous malignant melanoma to metastasize to the GI tract [14]. Clinically, gastric metastases could be silent for many years which can occur in about 24.1% of patients [14] or could only give vague signs mimicking chronic gastritis which is often underestimated by both patients and physicians [3]. The symptoms of GI tract are non-specific and the most common are abdominal pain and GI bleeding [14] which is hardly noticed by the patient. This is the reason why the diagnosis is rare during life but may occur during a follow-up which is what happened to this patient when she underwent a positron emission tomography.

With regard to the appearance of endoscopic gastric metastases, it is heterogenous [15] but some morphological types are described more frequently in the literature. The classic appearance is multiple, small nodules usually pigmented in endoscopy images and sometimes ulcerated as described in many studies [3, 6, 10]. This appearance was found in the gastric fundus and the second duodenal portion in our patient.

Lesions with secondary involvement by fungus were described in another study [5] as the vegetating mass we found in the anterior wall of the gastric body. Lastly, a vegeto-infiltrative lesion was found in the lesser curvature as described in other studies as a submucosal mass or neoplastic infiltration area [1, 3, 10, 15]. This reinforces that there is no typical pattern that allow to clearly identify a gastric lesion as a metastasis as the presentations vary.

Multiple biopsies were performed and the histology was compatible with the diagnosis of metastatic melanoma. Immunohistochemistry revealed a homogeneous staining of the neoplastic component for the S-100 protein and for HMB45.

There is no guideline for the treatment of gastric metastasis but since the stomach is rarely the only site of metastasis, systemic therapy is generally used [5]. When the patient has complications that can be relieved with surgery, a partial or total gastrectomy shows good results for symptom relief and might increase life expectancy [9, 16]. Concerning treatment by radiation, melanoma is usually a radio-resistant tumor [17] but can be used palliatively to stop tumor bleeding [5].

5. Conclusion

Gastric metastatic melanoma can present itself through different morphologies. In this case we showed three different morphologies and even so the patient was asymptomatic. This finding shows the importance of early upper digestive endoscopy in patients diagnosed with melanoma even in the absence of gastrointestinal symptoms, regardless of how long ago the initial diagnosis or treatment of melanoma was made. Early identification of metastases can better guide recommendations of therapeutic treatment and improve patients' outcomes, although the overall prognosis remains poor.

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