

Metastatic gastric melanoma: a challenging diagnosis

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ABSTRACT

Background. The stomach is regarded as a rare site for metastasis. When a gastric mass is observed macroscopically, the presumed diagnosis is usually a primary gastric carcinoma. However, the stomach may be involved in metastatic malignant melanoma. Besides a possible macroscopical misdiagnosis, metastatic gastric melanoma may also be misdiagnosed microscopically as adenocarcinoma due to its protean histological characteristics. These features make metastatic gastric melanoma a challenging diagnosis in some cases.

Case report. We report a patient with metastatic gastric melanoma referred to us with an initial macroscopic and histopathological diagnosis of primary gastric adenocarcinoma. He was diagnosed as having metastatic gastric melanoma by further examination because of the peculiar metastatic involvement and normal gastrointestinal tumor marker levels.

Conclusions. The stomach may be involved in melanoma and melanoma metastasis to the stomach is a diagnosis that should be taken into account while evaluating any gastric mass lesion. It is likely to be encountered more commonly nowadays due to the significant increase in the melanoma incidence. A history of melanoma, an atypical metastatic pattern, and normal gastrointestinal tumor marker levels may contribute to its diagnosis. Free full text available at www.tumorionline.it

Introduction

Although the stomach is rarely the site of metastatic disease, it can be involved in malignant melanoma¹. However, a possible diagnosis of metastatic gastric melanoma is rarely taken into account, especially if the prior diagnosis of melanoma is unknown. This may result in a misdiagnosis of metastatic gastric carcinoma. Here we report a case of metastatic gastric melanoma diagnosed initially as metastatic gastric signet-ring cell carcinoma.

Case report

The patient was a 54-year-old man with complaints of anorexia and weight loss of 3 months' duration. He was admitted to a local hospital where iron deficiency anemia was established. In his upper gastrointestinal system endoscopy, a tumoral ulcerated mass lesion protruding into the lumen was noted at the corpus. The presumed macroscopic diagnosis was primary gastric carcinoma. The histopathological diagnosis was diffuse infiltrative signet-ring cell gastric carcinoma. He was referred to our hospital for further assessment. His past medical history was only remarkable for cigarette smoking (40 pack-years). Physical examination was also unremarkable. Laboratory examination revealed high C-reactive protein (76 mg/L), iron deficiency and anemia of chronic disease (hemoglobin: 102 g/L, hematocrit: 0.32, MCV: 84 fL, Fe: 2

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$\mu\text{mol/L}$, total iron binding capacity: $45 \mu\text{mol/L}$) and elevated LDH ($8.7 \mu\text{kat/L}$). CA 19-9 and CEA levels were within the normal limits (16.6 kU/L , $0.75 \mu\text{g/L}$, respectively). Thoracoabdominal CT was performed for metastatic screening. There were multiple metastatic nodules in the bilateral lung parenchyma and metastatic hypodense lesions in the pancreatic tail and spleen, but not in the liver or peritoneum. The pathological preparation was obtained, which was similar to that of signet-ring cell carcinoma. Upper gastrointestinal system endoscopy was repeated. It revealed tumor lesions of 0.4-3.5 cm with necrotic centers at the cardia, corpus and papilla, and multiple polypoid lesions of 0.3-1.5 cm along all the observed duodenal segments. The macroscopic appearance was compatible with a carcinoma in a patient with polyposis syndrome. Biopsies were performed from the lesions in the cardia, corpus, and papilla along with duodenal polypectomy. This time, immunohistochemical staining pointed to a diagnosis of malignant melanoma in the corpus, papilla and duodenal polyp (S-100: [+], HMB45: [+]; pancytokeratin: [-], kappa: [-], lambda: [-], CD30: [-], LCA: [-], CD38: [-], EMA: [-], chromogranin [-], synaptophysin: [-], PLAP: [-]). During follow-up, colonoscopy was also performed but yielded no significant indications for metastasis. No primary lesion was detected by examination of the skin and eyes. However, the patient was found to have undergone a pigmented nevus excision from his back 6 months earlier without any pathological examination. The patient was started on chemotherapy. He is alive in the third month from the metastatic melanoma diagnosis but with a poor performance status.

Discussion

Our patient presented to our center with a presumed diagnosis of primary gastric signet-ring cell carcinoma. This is not unusual because the stomach is regarded as a rare site for metastasis¹. Clinicians usually make the diagnosis of a primary gastric carcinoma when they encounter a gastric mass lesion macroscopically. Also, malignant melanoma can produce diagnostic problems for the histopathologist because of its changeable histological characteristics². The recently recognized signet-ring cell pattern can be particularly confusing and must be distinguished from adenocarcinoma². These features make metastatic gastric melanoma a challenging diagnosis. The peculiar metastatic pattern was a factor guiding the melanoma diagnosis in this patient. During screening for metastasis, he was found to have metastases in the bilateral lung parenchyma, pancreas and spleen but not the liver or peritoneum. The most com-

mon sites of metastases from gastric cancer are liver, lung and bones³, the liver being the most common. It is uncommon for a gastric primary to metastasize widely while preserving the liver or peritoneum. Furthermore, the tumor markers for the gastrointestinal system (CA 19-9 and CEA) were within normal limits despite the widespread metastatic disease. This was also a clue to an alternative diagnosis.

The stomach may be involved in melanoma in approximately 20% of cases^{4,5}. It should be noted that the incidence of melanoma continues to rise faster than that of any other malignancy⁶. This may result in increased findings of gastric melanoma metastasis today and in the future. Its correct diagnosis is important because the palliative regimen differs according to the histological type of the metastatic disease. Furthermore, gastric metastasis may precede other evidence of metastatic spread of melanoma¹ and its proper diagnosis may spare these patients radical local excision of the primary. The diagnosis may not be very difficult if there is a history of a primary melanoma. In our case, the patient did not consider the nevus excision performed 6 months earlier as noteworthy. Therefore, a detailed history should be obtained including any even seemingly unimportant operation. A discordant metastatic pattern and normal gastrointestinal tumor marker levels are other clues for the correct diagnosis, especially if the history of prior melanoma is unknown.

We conclude that the stomach may be involved in melanoma, and melanoma metastasis is a diagnosis that should be considered while evaluating any mass lesion in the stomach. It is likely to be encountered more commonly nowadays due to the significant increase in the melanoma incidence. Besides a history of melanoma, an atypical metastatic pattern not expected in primary gastric carcinoma and normal gastrointestinal tumor marker levels may aid in its diagnosis.

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