

Nontraumatic massive hemoperitoneum from melanoma metastatic to the uterus

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Massive hemoperitoneum is most commonly associated with traumatic abdominal injuries and gynecologic emergencies, but it can present as a complication of disseminated malignant disease. Although metastatic melanoma has been described as a source of gastrointestinal hemorrhage, clinical presentation of massive hemoperitoneum is exceedingly rare.¹ We present a case of melanoma metastatic to the uterus as a cause of massive nontraumatic hemoperitoneum.

Case report

In 1993, this 53-year-old woman had a malignant melanoma of the hard palate for which she underwent surgical excision. Seven years later, bilateral pulmonary metastases were discovered and combination chemotherapy with cisplatin–dacarbazine was begun. Following her third cycle of chemotherapy, routine complete blood count revealed a hemoglobin level of 54 g/L. The patient had complained of increasing fatigue and her abdomen was distended, but it was not tender and there was no source of blood loss. No abdominal masses were palpable and bowel sounds were normal. Computed tomography of the chest and abdomen revealed progressive bilateral pulmonary metastases with small bilateral pleural effusions, diffuse intraperitoneal fluid, and an enhancing lesion arising from the fundus of the uterus and right

adnexa. Paracentesis yielded more than 2 L of frank blood.

Because of ongoing hemorrhage (transfusion of 14 units of red blood cells), laparotomy was done. Another 3 L of blood was aspirated from the peritoneal cavity, and a solitary lesion with overlying clot was identified on the fundus of the uterus (Fig. 1a). Hysterectomy and bilateral salpingoophorectomy was performed without complication. Histopathological examination of the specimen confirmed an invasive

surface metastatic melanoma deposit with hemorrhage (Fig. 1b). One month later the patient returned with increasing shortness of breath. Physical examination and chest radiography were consistent with a large right pleural effusion. A chest tube drained 2.5 L of blood. The drainage rapidly diminished and pleurodesis was performed. At the time of writing (3 mo after hysterectomy) she had brain metastases, which were moderately responsive to steroids. Otherwise she was well.



FIG 1. (a) Surgical specimen consisting of a solitary lesion with blood clot on the fundus of the uterus. (b) On histopathological examination of the excised specimen there is an invasive surface implant of metastatic melanoma with hemorrhage hematoxylin–eosin stain, original magnification $\times 10$.

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Discussion

Approximately 90% of cases of hemoperitoneum are the result of traumatic injuries and nonmalignant gynecologic conditions.² When intraperitoneal hemorrhage is a consequence of malignant disease, the most common causes are rupture of either primary or secondary liver tumours. The remaining causes of hemoperitoneum include a constellation of rare diagnoses, including rupture of benign or malignant solid organ tumours, a vascular phenomenon and idiopathic spontaneous hemoperitoneum. Metastatic melanoma as a cause of hemoperitoneum is rare.¹

Melanoma has a propensity to metastasize widely, with the potential to involve any organ system. This is highlighted by autopsy findings that up to 35% of patients have metastases to the gastrointestinal tract and 58% have pulmonary metastases, with up to 95% of patients with identified metastatic disease having multiple organ involvement.³ There was no case of metastatic melanoma in a 17-year review by Walsh and Williams who examined 435 omental and peritoneal nodules.⁴ In a more recent review of 1521 cases of metastatic melanoma, no initial metastases were found to involve the uterus, and the rate of multiple-site involvement was only 14%.⁵ The majority of metastases were found in the lungs, skin, lymph nodes, brain, liver and gastrointestinal tract, in descending order of frequency. Two recent studies utilizing

CT and laparoscopy, confirmed the low rate of peritoneal metastases (4.3% and 4.1% respectively).^{6,7} Despite frequent metastasis, melanoma secondaries are usually asymptomatic.

In this case, the source for the hemoperitoneum was identified as a solitary surface metastatic uterine deposit. This lesion was amenable to surgical resection and was managed successfully by hysterectomy. Although information on the management of symptomatic peritoneal metastases from melanoma is scanty, the finding of a solitary lesion suggests that these metastatic lesions may be managed with surgery. In addition, in a study that used CT to identify abdominal metastases from melanoma, only 2 of 10 cases with peritoneal secondaries had diffuse peritoneal involvement. The others exhibited a limited number of metastases.⁶ A recent study supports the surgical resection of gastrointestinal metastases of melanoma regardless of symptoms, with findings of prolonged palliation and improved survival resulting from surgical intervention.⁸

Summary and conclusion

We have reported a case of nontraumatic massive hemoperitoneum caused by melanoma metastatic to the uterus that was readily managed with surgery. We believe this strategy provided effective palliation, improved quality of life and potentially prolonged survival for this patient.

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