Gastric melanoma

An 84-year-old woman was admitted with haematemesis. She had a history of malignant melanoma of the right foot. She had originally presented with a 1-year history of an increasingly pigmented mass over the third toe web space complicated by subacute pulmonary embolism. The latter took the form of non-occlusive thrombi in segmental and subsegmental pulmonary arteries, which were detected by computed tomography carried out with the intent disease of staging. The patient was treated with transmetatarsal amputation and received anticoagulation therapy.

On admission, her haemodynamic status was stable and findings on physical examination were unremarkable. She was noted to be over-anticoagulated; her international normalised ratio (INR) was 5.9. Urgent oesophagogastroduodenoscopy revealed multiple pigmented nodular mucosal swellings involving the stomach and duodenum (Fig 1). Gastric biopsy showed the mucosa to be infiltrated by sheets and irregular nests of round cells with round-to-lobated nuclei and moderate pink cytoplasm after staining (Fig 2a). The cells were immunoreactive for S-100 protein and HMB-45 while staining for cytokeratin was negative (Fig 2b). The diagnosis was metastatic melanoma. The patient was treated with an intravenous infusion of fresh frozen plasma to correct the over-anticoagulation; the proton-pump inhibitor pantoprazole 40 mg daily by mouth was also prescribed. Clinically the upper gastrointestinal (GI) bleeding ceased and later anticoagulation with oral warfarin was resumed, using a lower-than-usual target INR of 2.

Malignant melanoma is among the most common malignancies associated with metastasis to the GI tract and can become manifest either at the time of the primary diagnosis or as feature of recurrence.[1] In an autopsy series of patients with advanced malignant melanoma, the frequency of GI metastases was 44%, among which the commonest sites were the small bowel (36%), the colon (28%), and the stomach (23%).[2] The presenting features often mimic those of other GI tumours and include abdominal pain, intestinal obstruction, GI bleeding, and visceral perforation.[1] The lesions usually appear as multiple ulcerated polyps that may be pigmented or amelanotic. Histology reveals lymphocytic infiltration of the dermis with melanophages, vascular proliferation and reparative fibrosis, whereas primary mucosal melanomas are characterised by the presence of precursor lesions in the form of junctional melanocytic proliferation within the mucosa.[1] Special immunohistochemical stains, including HMB-45 and S-100, can be used to confirm the diagnosis of metastatic melanoma.[3] Routine radiographic screening for GI metastases is not recommended

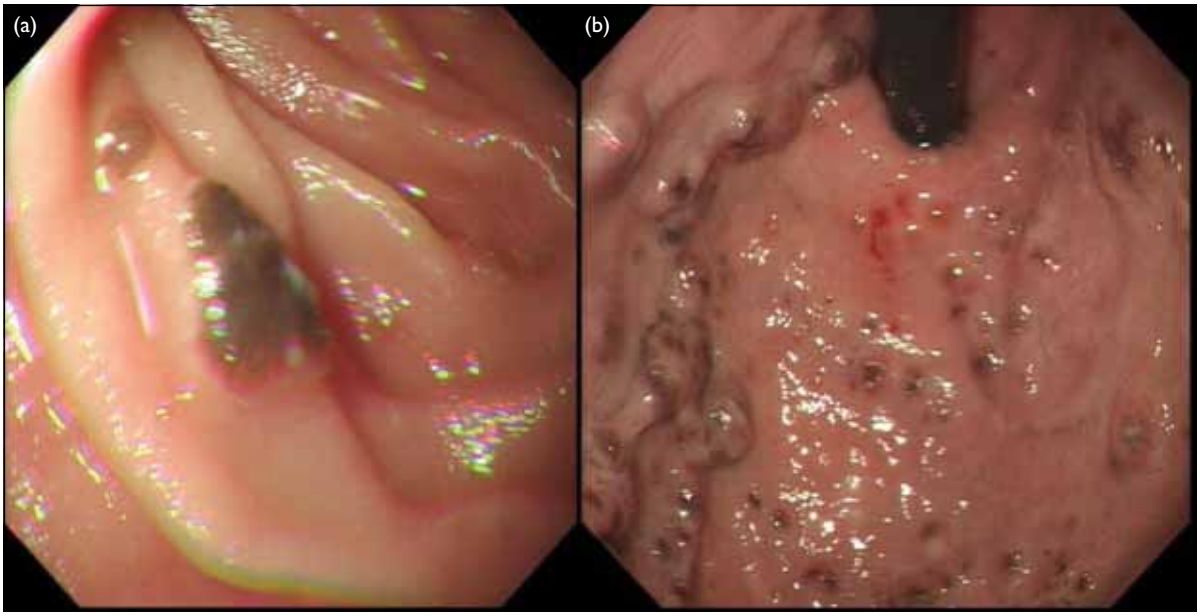

FIG 1. Multiple pigmented nodular mucosal swellings involving the (a) duodenum and (b) stomach were revealed by the oesophagogastroduodenoscopy

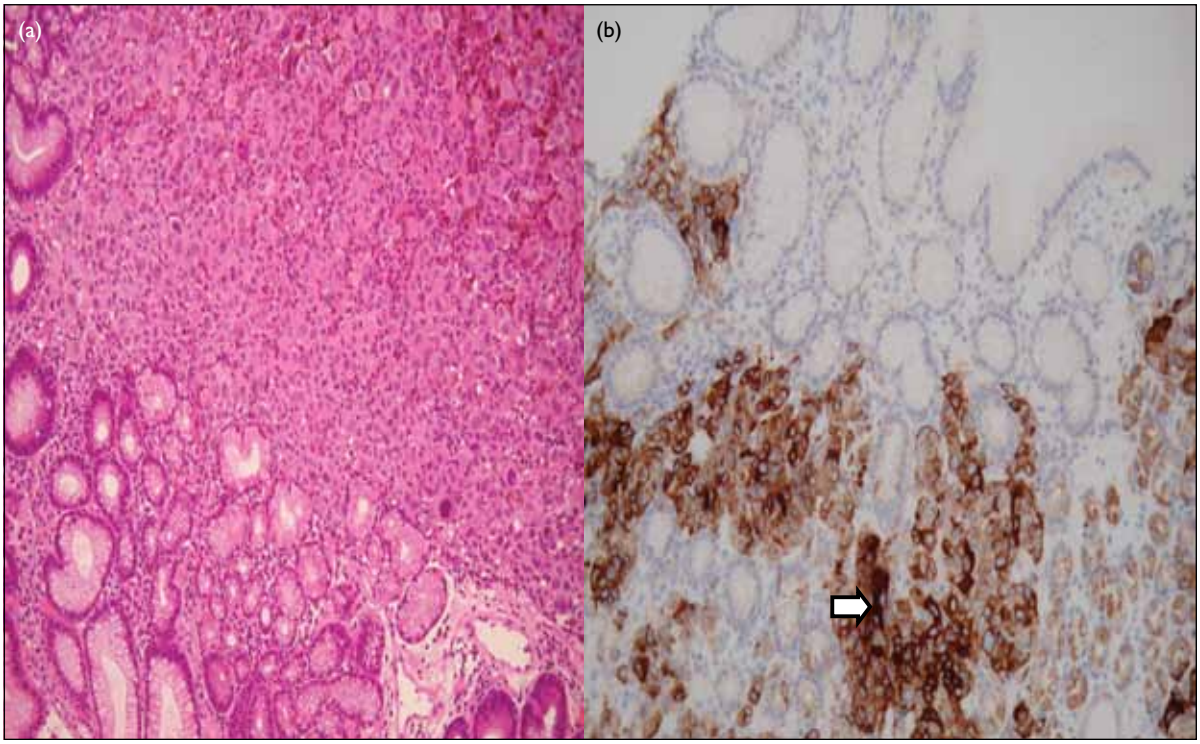

FIG 2. (a) The high-power view showing loosely cohesive round cells in the lamina propria adjacent to residual gastric glands (H&E). (b) The tumour cells (arrow) stained positive for the melanocyte marker HMB-45

in primary cutaneous diseases or in the setting of already-known metastatic disease. This is because in the primary disease, the yield is low and in the latter condition, it is unlikely to alter the management plan. The prognosis of patients with metastatic malignant melanoma is poor; several series have reported median survivals of 6 to 8 months and 5-year survival rates of less than 10%, as 50% of them also have metastatic melanoma in other sites.[4] The treatment of GI metastatic melanoma may involve surgical resection, chemotherapy, and immunotherapy. Several studies have reported that surgical resection is effective for palliation and may prolong survival, particularly in those who have the GI tract as the initial site of distant metastasis.[5] A recent phase 3 trial showed that the combination of chemotherapy and immunotherapy can be tried as a last resort, because patients with advanced melanoma receiving gp 100:209-217 (210M) peptide vaccine plus interleukin-2 evidently had a longer progression-free survival.[6] In our case, the patient opted for conservative management for her metastatic melanoma.

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References

1. Schuchter LM, Green R, Fraker D. Primary and metastatic diseases in malignant melanoma of the gastrointestinal tract. Curr Opin Oncol 2000;12:181-5.
2. Patel JK, Didolkar MS, Pickren JW, Moore RH. Metastatic pattern of malignant melanoma. A study of 216 autopsy cases. Am J Surg 1978;135:807-10.
3. Clemmensen OJ, Fenger C. Melanocytes in the anal canal epithelium. Histopathology 1991;18:237-41.
4. Barth A, Wanek LA, Morton DL. Prognostic factors in 1,521 melanoma patients with distant metastases. J Am Coll Surg 1995;181:193-201.
5. Ollila DW, Essner R, Wanek LA, Morton DL. Surgical resection for melanoma metastatic to the gastrointestinal tract. Arch Surg 1996;131:975-80.
6. Schwartzentruber DJ, Lawson DH, Richards JM, et al. gp100 peptide vaccine and interleukin-2 in patients with advanced melanoma. N Engl J Med 2011;364:2119-27.