

A rare case of malignant melanoma in stomach presented on ^{18}F -FDG PET/CT

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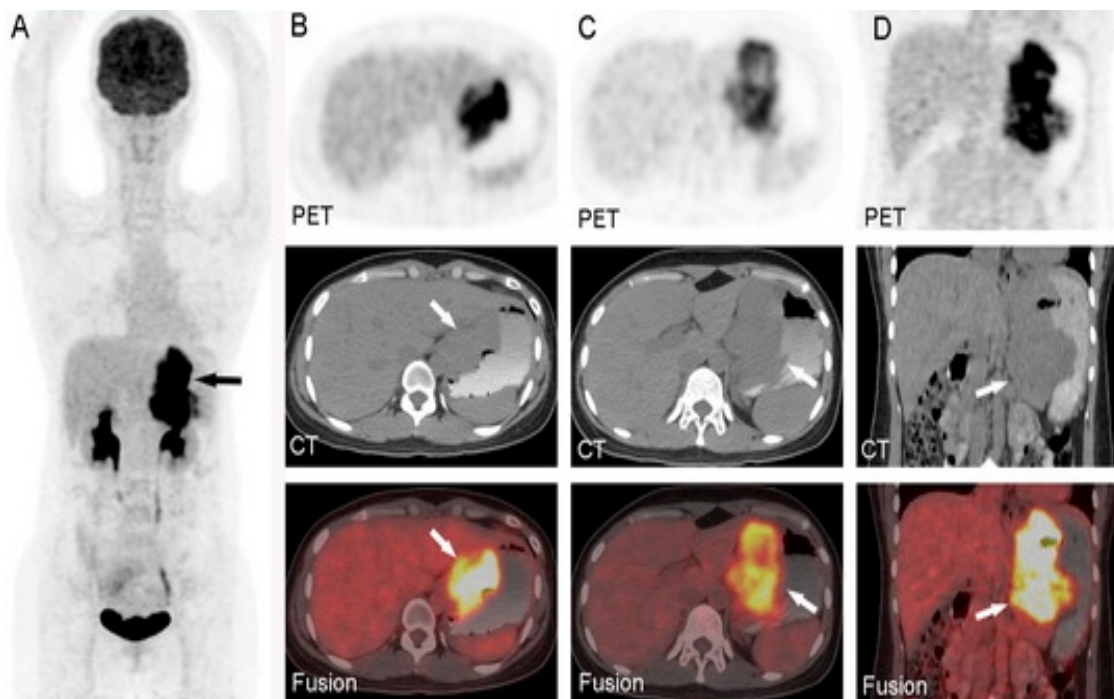


Figure. A 31-year-old woman presented with a 1-month history of dysphagia. An outside plain computed tomography (CT) scan of the abdomen indicated a malignant gastric tumor. Fluorine-18-fluorodeoxyglucose positron emission tomography/CT (^{18}F -FDG PET/CT) was performed for staging. The maximum intensity projection (A) image demonstrated a huge mass of intense metabolic activity in the stomach (arrow), and no abnormal ^{18}F -FDG metabolism was found in other parts of the body. The transverse images (B) showed an increased ^{18}F -FDG uptake mass in the gastric fundus, which was unclearly separated from the liver (arrows). The transverse images (C) and the coronal images (D) showed diffuse thickening of the gastric wall on the lesser curved side of the body of the stomach with an intense ^{18}F -FDG uptake (SUVmax: 9.8). The findings suggested a primary malignant tumor of the stomach, and gastric cancer was the first consideration. A gastroscopic biopsy of the tumor was performed. Hematoxylin and eosin staining of a section of the tumor showed sheet-like malignant cells with large nuclei and eosinophilic cytoplasm containing dark brown pigment, which were positive for HMB-45, Melan-A, and S-100. These findings were consistent with a diagnosis of malignant melanoma of the stomach.

Malignant melanoma is commonly known to manifest in the skin, and primary melanoma of the gastrointestinal tract is extremely uncommon, and it was reported arising from the mucosa of the esophagus, anorectal and small bowel [1]. Fluorine-18-FDG PET/CT has strong evidence for diagnoses, staging to detect distant metastases, monitoring treatment response and predicting prognosis in malignant melanoma [2, 3]. However, the role of ^{18}F -FDG PET/CT in gastric wall lesions is challenging due to the physiologic ^{18}F -FDG uptake in the stomach and difference in the level of tracer activity in various pathological subtypes [4, 5], such as gastric cancer, gastric lymphoma, gastric ulcer, inflammatory fibroid polyp, and so on. This case illustrated that ^{18}F -FDG PET/CT images of malignant melanoma in the stomach are extremely rare [6, 7], and it should be included in the differential diagnosis of malignant gastric tumors when the tumor is highly ^{18}F -FDG avid.

The authors declare that they have no conflicts of interest.

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