Interesting Image

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Jejunal Undifferentiated Spindle Cell Sarcoma with Intussusception Revealed by ^{18}F-FDG PET/CT

^{18}F-FDG PET/BT ile Gösterilen İntussusepsiyonlu Jejunal Farklılaşmamış İğsi Hücreli Sarkom

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Abstract

Spindle cell sarcoma is a malignant tumor with low incidence. They can occur in the soft tissue, bone, or viscera. The characteristics of morphology, density, and metabolism of spindle cell sarcoma are related to the location of the lesion. A 61-year-old woman presented with vomiting after eating for 2 weeks. Signs of peritoneal irritation were involved, but no response for symptomatic treatment included antiemetic and antispasmodic therapy. Abdominal computed tomography (CT) indicated a mass in the intestinal tract in the pelvic cavity. Then, ^{18}F-fluorodeoxyglucose (^{18}F-FDG) positron emission tomography/CT was performed, which interestingly detected a jejunal malignancy mass in the left upper abdomen with annular high uptake of ^{18}F-FDG, which was complicated by intussusception and intestinal obstruction. Finally, the jejunal mass was pathologically clarified as an undifferentiated spindle cell sarcoma.

Keywords: ^{18}F-FDG PET/CT, jejunum, undifferentiated spindle cell sarcoma, intussusception, intestinal obstruction

Öz

İğsi hücreli sarkom düşük insidanslı malign bir tümördür. Yumuşak dokuda, kemikte veya iç organlarda oluşabilirler. İğsi hücreli sarkomun morfolojisi, yoğunluğu ve metabolik özellikleri lezyonun bulunduğu yer ile ilişkilidir. Altmış bir yaşında kadın hasta, 2 haftadır olan yemek yedikten sonra kusma şikayetiyle başvurdu. Peritoneal irritasyon belirtileri söz konusuydu ancak antiemetik ve antispazmodik tedaviye yanıt alınamadı. Batın bilgisayarlı tomografisinde (BT) pelvik kavitede bağırsaklarda kitle olduğu görüldü. Daha sonra ^{18}F-florodeoksiglukoz (^{18}F-FDG) pozitron emisyon tomografi/BT yapıldı ve ilginç bir şekilde sol üst karın bölgesinde, intussusepsiyon ve bağırsak tıkanıklığı ile komplike olan, halka şeklinde yüksek ^{18}F-FDG tutulumu olan jejunal malign kitle tespit edildi. Son olarak jejunal kitlenin patolojik olarak farklılaşmamış iğsi hücreli sarkom olduğu belirlendi.

Anahtar kelimeler: ^{18}F-FDG PET/BT, jejunum, farklılaşmamış iğ hücreli sarkom, intususepsiyon, bağırsak tıkanıklığı

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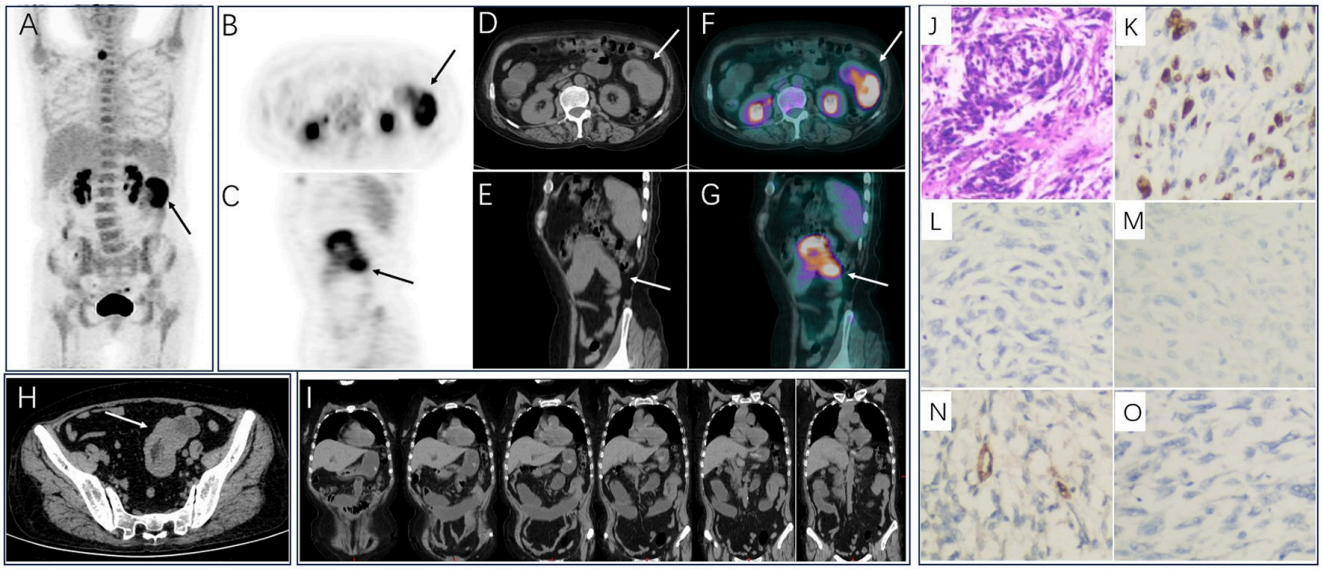

Figure 1. A 61-year-old woman presented with vomiting after eating for 2 weeks. Signs of peritoneal irritation were involved, but no response for symptomatic treatment included antiemetic and antispasmodic therapy. Abdominal computed tomography (CT) (image H) indicated a mass in the intestinal tract in the pelvic cavity (white arrow). Then ^{18}F-fluorodeoxyglucose positron emission tomography/CT (^{18}F-FDG PET/CT) was performed (60 min post-injection 335MBq) to assist differentiate the character of the mass and assess the state of the patient's illness. Maximum intensity projection ^{18}F-FDG PET image (A) showed an increased FDG uptake lesion in the left upper abdomen (black arrow). Axial and sagittal PET (B&C), CT (D&E), and fuzed CT (F&G) images of the abdomen revealed markedly increased ^{18}F-FDG uptake (maximum standardized uptake value: 10.9) corresponding to a jejunal mass with clear boundaries (arrows), which was complicated by intussusception and intestinal obstruction (I). These findings indicated that this patient could be diagnosed with a malignant small bowel tumor, and successful surgical resection was conducted shortly thereafter. Pathological examination showed spindle-shaped cell proliferation, arranged in bundles or vortices, with large and deeply stained nuclei, easy to see nuclear division (J, H&E, ×100). Immunohistochemical staining analysis revealed that the specimen was positive for Ki67 (K, ×100, 40%), CD117 (focal area), smooth muscles actin, Vim, and α-1-antichymotrypsin but negative for epithelial membrane antigen (L, ×100), S-100 (M, ×100), CD34 (N, ×100), cytokeratin (O, ×100), DOG-1, desmin, Lyso, H-caldesmon, calponin, and MyoD1. The patient's diagnosis was suggested to be undifferentiated spindle cell sarcoma. Spindle cell sarcoma is a malignant tumor with low incidence and worse prognosis with a high rate of recurrence and metastasis (1). The incidence of jejunal tumors is very low compared with other primary gastrointestinal malignancies, in which sarcoma only accounts for 12% of jejunal tumor (2), let alone undifferentiated spindle cell sarcoma of the jejunum, which is rarely reported (3,4,5). Undifferentiated spindle cell sarcoma in the jejunum can lead to intestinal obstruction (4,5). Capsule endoscopy can be used to detect lesions in the small intestine when conventional endoscopy cannot be achieved, except for intestinal obstruction formed (6). This case suggested that undifferentiated spindle cell sarcoma occurs in the jejunum with high uptake of ^{18}F-FDG as in other tissues and organs (7,8). The boundaries were clearly without lymphatic gland and peritoneum metastasized (4,5). This case reported that undifferentiated spindle cell sarcoma occurs in the jejunum with marked uptake of ^{18}F-FDG that distinguished from simple intussusception and intestinal obstruction suggested by CT scan and suggested ^{18}F-FDG PET/CT might compensate for the shortcomings of endoscopic examination in the jejunum when intestinal obstruction formed.

Ethics

Informed Consent: We obtained informed consent from study subjects for publishing their data.

Authorship Contributions

Concept: X.L., Design: X.L., Data Collection or Processing: H.L., Analysis or Interpretation: H.L., Literature Search: X.L., Writing: H.L.

Conflict of Interest: No conflicts of interest were declared by the authors.

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