Mesenteric desmoid tumors masquerading as peritoneal carcinomatosis

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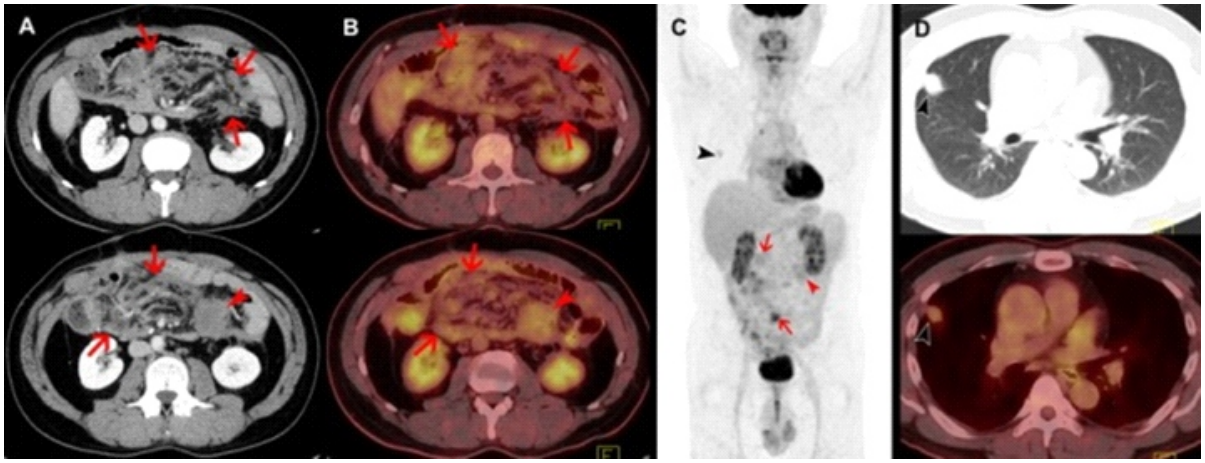

Figure 1. A 48-year-old man presented with a 1-month history of dyspepsia, diarrhea, and postprandial abdominal pain. He had underlying familial adenomatous polyposis (FAP) and had undergone total colectomy 3 years ago. Axial contrast-enhanced computed tomography (CT) images (A) showed diffuse infiltration (red arrows) with a 4.5cm irregular enhancing mass (red arrowhead) in mesentery, concerning for peritoneal carcinomatosis. Fluorine-18-fluorodeoxyglucose (^{18}F-FDG) positron emission tomography (PET)/CT imaging was performed for further evaluation. In axial fused PET/CT (B) and maximum intensity projection PET (C) images, diffuse mesenteric infiltration (red arrows) with an irregular mass (red arrowheads) showed mildly-to-moderately increased ^{18}F-FDG uptake (SUVmax 6.8). Besides, a 2cm lung nodule with mildly increased ^{18}F-FDG uptake (SUVmax 2.4, black arrowheads) was noted in right upper lobe (C, D).

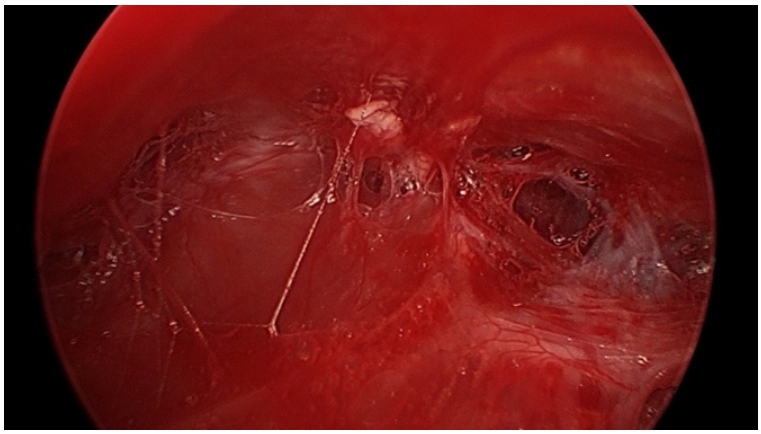

Figure 2. Surgical exploration demonstrated severe dense bowel adhesions and biopsy was performed on mesenteric lesion. Frozen section showed fibrous tissue, suggestive of mesenchymal tumor. And then, wedge resection of the lung nodule was performed and histologic result was leiomyomatous hamartoma. Follow-up abdomen CT images after 3 and 6 months showed diffuse mesenteric infiltration with little interval change.

Desmoid tumors, also known as aggressive fibromatosis, are rare mesenchymal neoplasms. It can arise sporadically or in association with FAP as hereditary polyposis syndrome and its incidence has been reported between 7% and 25% in patients with FAP. Desmoid tumors are slow-growing and histologically benign, but tend to be locally aggressive, resulting in severe morbidity or mortality. Currently, desmoid tumors have become the leading cause of death in patients with FAP because most of patients undergo prophylactic colectomy at young age to prevent colorectal cancer [1, 2]. Desmoid tumors are classified as extra-abdominal, abdominal wall, or intra-abdominal based on anatomical location. Most common site of intra-abdominal desmoid tumors is small bowel mesentery. Mesenteric desmoid tumors can be presented as mass-like, infiltrative, or intermixed mass-like and infiltrative patterns in imaging studies depending on histologic characteristics such as cellularity, amount of fibrous and collage-

nous components and vascularity [3-5]. In conclusion, careful differential diagnosis is necessary because of mesenteric desmoid tumor as infiltrative pattern can mimic a peritoneal carcinomatosis in patients with FAP.

Bibliography

1. Nieuwenhuis MH, De Vos Tot Nederveen Cappel W, Botma A et al. Desmoid tumors in a dutch cohort of patients with familial adenomatous polyposis. *Clin Gastroenterol Hepatol* 2008; 6: 215-9.
2. Desurmont T, Lefevre JH, Shields C et al. Desmoid tumour in familial adenomatous polyposis patients: responses to treatments. *Fam Cancer* 2015; 14: 31-9.
3. Faria SC, Iyer RB, Rashid A et al. Desmoid tumor of the small bowel and the mesentery. *Am J Roentgenol* 2004; 183: 118.
4. Zhu H, Chen H, Zhang S et al. Intra-abdominal fibromatosis: differentiation from gastrointestinal stromal tumour based on biphasic contrast-enhanced CT findings. *Clin Radiol* 2013; 68: 1133-9.
5. Azizi L, Balu M, Belkacem A et al. MRI features of mesenteric desmoid tumors in familial adenomatous polyposis. *Am J Roentgenol* 2005; 184: 1128-35.

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