Calcifying Fibrous Tumor of the Mesentery Presenting with Small Bowel Obstruction

Usama Ateya, Aziza Al Ghafri* and Fatima Salih

Radiology Department, Ibri hospital, Oman

Received: 11 July 2023

Accepted: 21 September 2023

*Corresponding author: alazhar23@yahoo.co.uk

DOI 10.5001/omj.2025.28

Abstract

Calcifying fibrous tumor (CFT) is a rare benign tumor of mesenchymal origin that can be present at the gastrointestinal tract (GIT) as well as variety of superficial and deep soft tissues including neck, pleura and lung. It has different presentations or could be asymptomatic. We report a case with rare presentation of CFT which was found at jejunal mesentery and attached to a mesenteric band causing small bowel obstruction (SBO). What made our case distinctive was the presence of a mesenteric CFT combined with a mesenteric band causing constriction of the small bowel, leading to small bowel obstruction. Up to our knewlodge this is the first case in litreture to report a congenital band associated with CFT. The mass was surgically removed and the band released and ligated.

Keywords: Tumor; Benign; Mesenchymal; Bowel; GIT.

Introduction

Calcifying fibrous tumor (CFT)is a rare benign tumor of mesenchymal origin that was documented in different anatomical sites including the gastrointestinal tract as well as a variety of superficial and deep soft tissues as neck, pleura, and lung.[1] At the gastrointestinal tract (GIT) it is usually asymptomatic and incidentally discovered, or it can present with different symptoms including abdominal pain, dyspepsia, nausea, or vomiting, also could be complicated by gastric ulcers, bowel obstruction, volvulus, or intussusception.[2]

Treatment is usually by surgical resection or endoscopic sub mucosal dissection.[3] Calcifying fibrous tumor (CFT) of the gastrointestinal tract (GIT) has no tendency for local recurrence compared to soft tissue CFT.[4] Also there are no reported cases of malignant transformation of CFT.[2]

Case Report

A 33-year-old male with no previous medical background presented to our emergency department with right iliac fossa (RIF) pain associated with nausea and vomiting for one day following taking food from outside. No loose motion and no respiratory or urinary symptoms. On examination, the patient was alert, conscious, and vitally stable with clear chest and RIF tenderness; he was referred to general surgery with impression of appendicitis, the other differential diagnosis would be gastroenteritis. Laboratory investigations showed unremarkable blood count (CBC) and elevated C-reactive protein test (CRP) = 54 mg/l. Abdominal x-ray showed dilated small bowel. By ultrasound, the appendix couldn't be visualized due to bowel gases. An urgent request for an abdominal CT scan resulted in the administration of intravenous contrast only, with no oral contrast. The scan, conducted during the portovenous phase, revealed distended small bowel loops and a dilated appendix. These findings raised suspicion of appendicitis accompanied by irritation or obstruction of the small bowel as a secondary effect. Nasogastral tube (NGT) was inserted to relieve obstruction but still there was increasing abdominal distension and guarding. The surgical team opted to proceed with

diagnostic laparoscopy. During the laparoscopic examination, the appendix appeared normal, but a mesenteric mass was identified. Consequently, they decided to perform a laparotomy, revealing a band constricting the small bowel, which was connected to both the omentum and a mesenteric jejunal mass. This mass did not obstruct the lumen of the jejunal loop but was firmly attached to the mesentery [Figure 1].

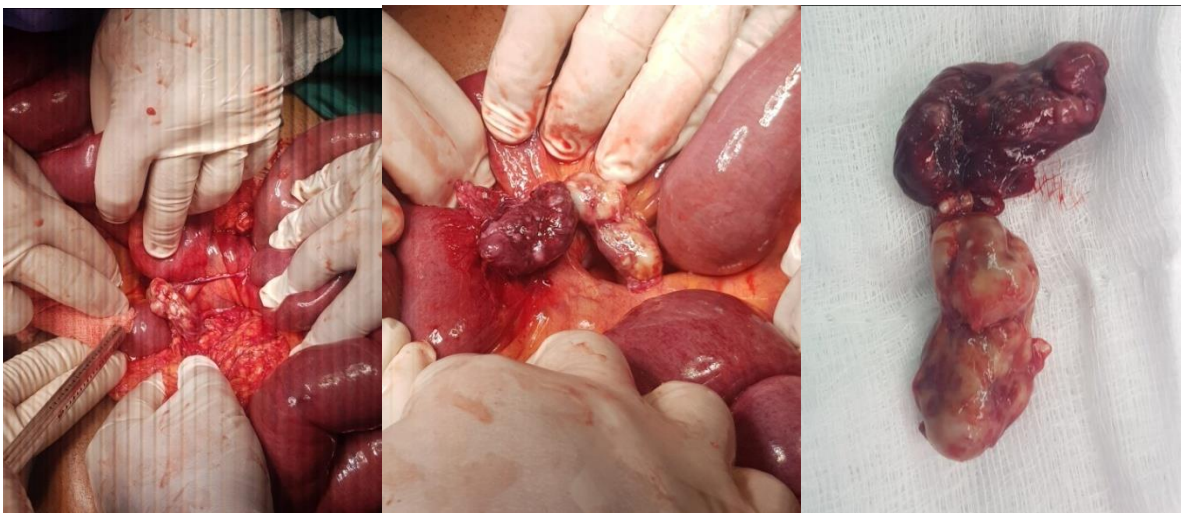

Figure 1: Intraoperative view of CFT and dilated small bowel loops.

The mass was excised completely and the band was released and ligated. Computed CT (CT)images were reviewed again and the mass could be detected then at small bowel mesentery with CT appearance similar to a small bowel loop (hence was not identified earlier, especially no bowel contrast was used), it also has marginal foci of calcifications [Figure 2].

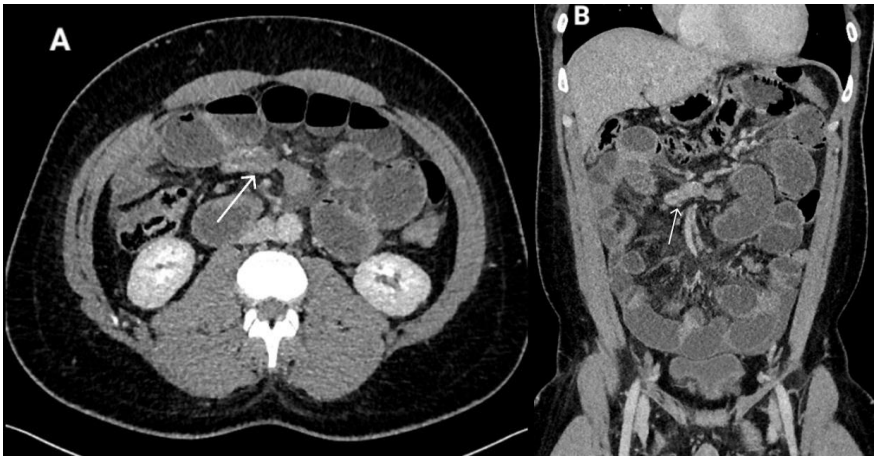

Figure 2: Axial & Coronal CT images showing mesenteric CFT (arrow), and dilated fluid filled small bowel loops.

Histopathology examination showed normal appendix, and sections from the excised mass showed paucicellular fibroblastic proliferation with bland spindle cells embedded in dense collagenous stroma with scattered calcifications and foci of lymphoplasmacytic infiltrate. There was no evidence of malignancy. The diagnosis was calcifying mesenteric pseudotumor [Figure 3].

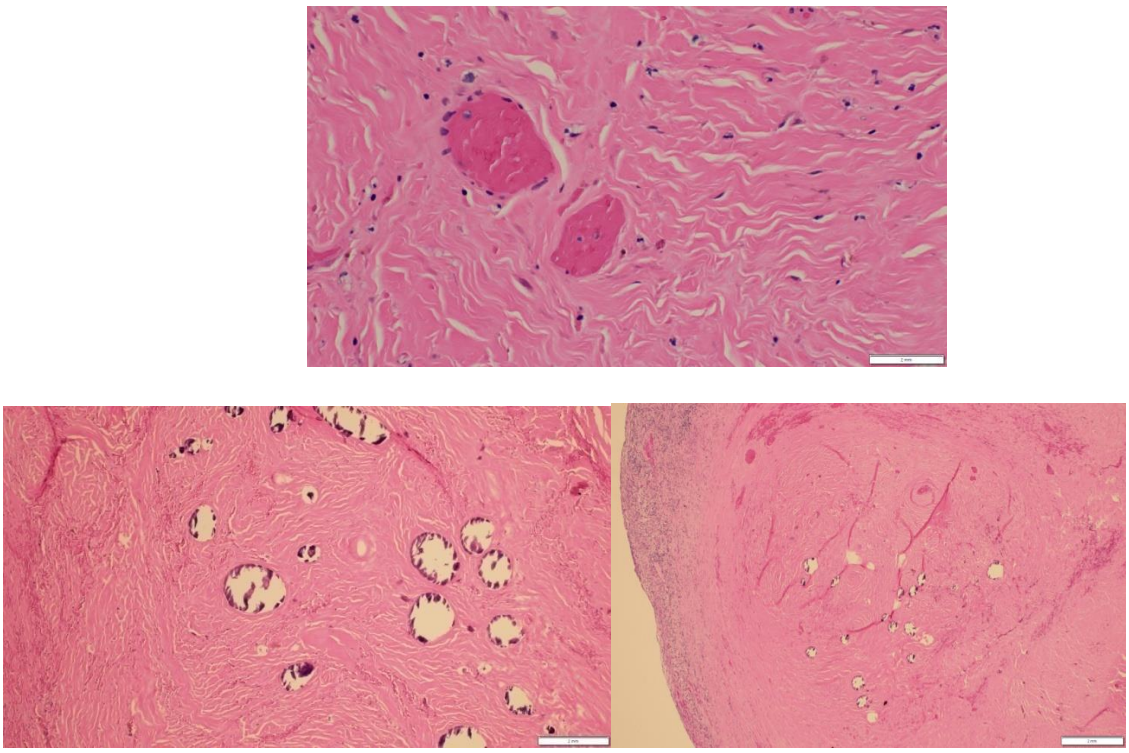

Figure 3: Histopathology sections show a well circumscribed hypocellular lesion composed of scattered bland cells embedded in highly collagenized stroma with dystrophic calcification. There are scattered chronic inflammatory cells. There is no atypia or malignancy.

Post operative, the patient was vitally stable with clean dressing, and soft abdomen; he was tolerating diet and passing motion, and was discharged uneventfully.

Discussion

CFT was first reported in 1988 as two cases of childhood soft tissue fibrous tumor with psammoma bodies.[5] At beginning, it was described as pseudotumor of possible inflammatory or traumatic etiology, after that it was named as calcifying fibrous tumor as was noted cases of local recurrence.[6] Chorti et al, estimated the frequency of abdominal CFT as low as one case yearly worldwide with trimodal age distribution, one peak at 0 – 4 years, 2nd one in mid-20s, and 3rd one in mid-30s - as in our patient - with many indications that this 3rd peak results as a late sclerosing stage of myofibroblastic tumor.[1]

What was unique in our case is the association of mesenteric CFT with a mesenteric band constricting small bowel and causing small bowel obstruction. Congenital bands are a rare cause of intestinal obstruction in children, and extremely rare in adults, and patients usually presents with obstruction with no history of previous trauma or surgery.[7] This was the case with our patient who had no previous trauma or surgery, and there was no hernia by examination and imaging, our CT scan confirmed the presence of small bowel obstruction and overlooked the mass at first due to its similar appearance to small bowel loops especially that no oral contrast was used to opacify the bowel as CT was requested on urgent basis, but laparoscopy detected the mass (CFT) and the mesenteric band, then upon detailed reviewing of CT images the mass could be detected.

Microscopically these lesions characteristically are hypocellular with abundant hyalinized collagen and are composed of bland cells with ovoid vesicular nuclei, and eosinophilic cytoplasm. Lymphoplasmacytic infiltrates are a consistent finding while psammomatous or dystrophic calcifications are common,[8] this was typical with our mass histopathology result.

Conclusion

Calcifying fibrous tumor (CFT) of the gastrointestinal tract (GIT)is a rare tumor that can be definitely diagnosed by histopathology examination. It can present with different symptoms depending upon its size and location. It can be associated with other pathologies such as congenital bands -like in our case - which should be suspected in patient presenting with small bowel obstruction without previous history of trauma or surgery and with no detectable hernias. Management is by surgical resection which is usually curative.

References

1. Chorti A, Papavramidis TS, Michalopoulos A. Calcifying Fibrous Tumor: Review of 157 Patients Reported in International Literature. Medicine (Baltimore) 2016 May;95(20):e3690. .

2. Turbiville D, Zhang X. Calcifying fibrous tumor of the gastrointestinal tract: A clinicopathologic review and update. World J Gastroenterol 2020 Oct;26(37):5597-5605. .

3. Ogasawara N, Izawa S, Mizuno M, Tanabe A, Ozeki T, Noda H, et al. Gastric calcifying fibrous tumor removed by endoscopic submucosal dissection. World J Gastrointest Endosc 2013 Sep;5(9):457-460. .

4. George SA, Abdeen S. Gastric Calcifying Fibrous Tumor Resembling Gastrointestinal Stromal Tumor: A Case Report. Iran J Pathol 2015;10(4):306-309.

5. Rosenthal NS, Abdul-Karim FW. Childhood fibrous tumor with psammoma bodies. Clinicopathologic features in two cases. Arch Pathol Lab Med 1988 Aug;112(8):798-800.

6. Nascimento AF, Ruiz R, Hornick JL, Fletcher CD. Calcifying fibrous 'pseudotumor': clinicopathologic study of 15 cases and analysis of its relationship to inflammatory myofibroblastic tumor. Int J Surg Pathol 2002 Jul;10(3):189-196. .

7. Dimitrios C, George AA, Dimosthenis Z, Nikolaos X. Intestinal obstruction due to an anomalous congenital band. Saudi J Gastroenterol 2008 Jan;14(1):36-37. .

8. Pezhouh MK, Rezaei MK, Shabihkhani M, Ghosh A, Belchis D, Montgomery EA, et al. Clinicopathologic study of calcifying fibrous tumor of the gastrointestinal tract: a case series. Hum Pathol 2017 Apr;62:199-205. .