

Introduction

Calcifying fibrous tumor (CFT) is a rare benign mesenchymal lesion that was first described in 1988 by Rosenthal et al. It can present as single or multiple tumors and is most frequently found in the gastrointestinal tract but has been documented throughout the body. Etiology and pathogenesis are unclear, and to date less than 200 cases have been reported in the literature. Preoperative diagnosis deems challenging, as imaging findings are generally nonspecific. We report a unique case of multifocal calcifying fibrous tumor presenting as small bowel perforation in a geriatric patient.

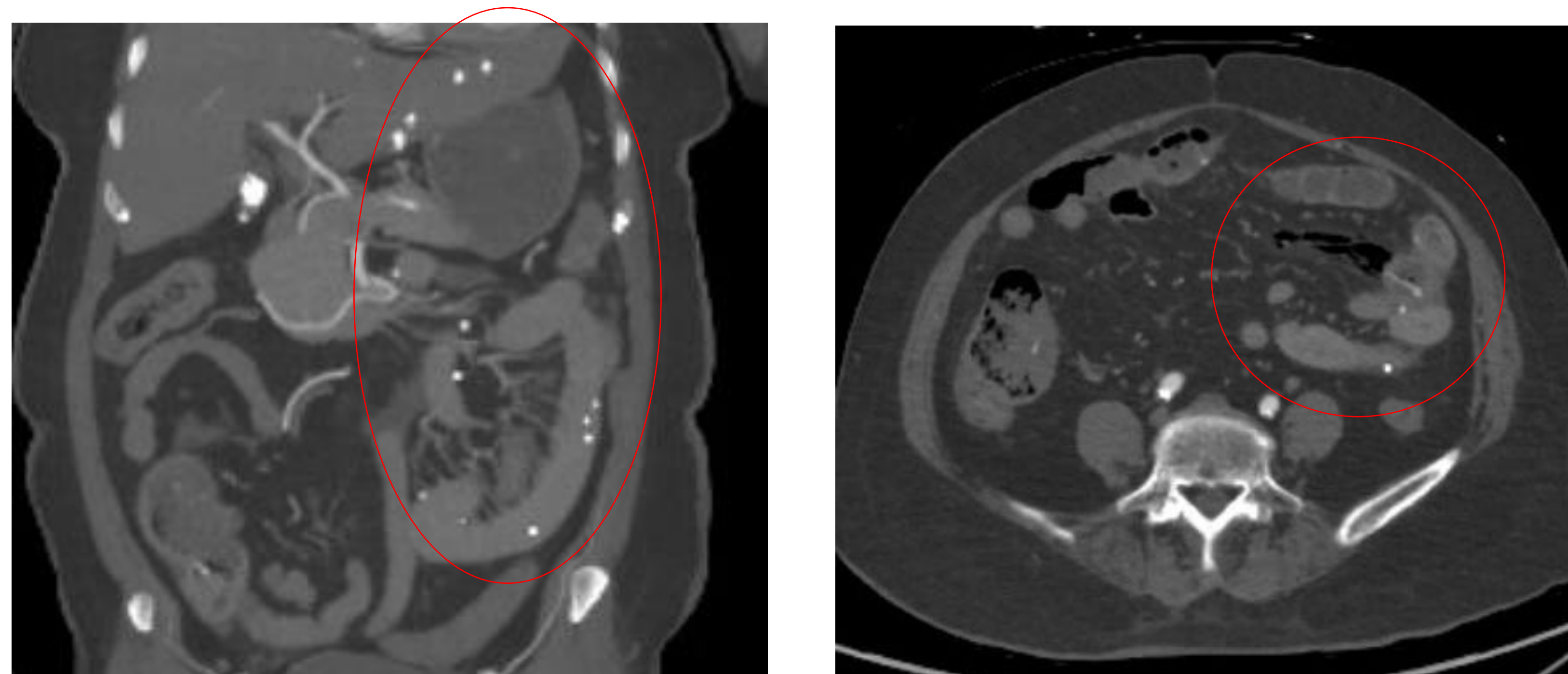
Case Report

An 84-year-old Cambodian female presented to the emergency room with sharp left-sided abdominal pain associated with nausea and vomiting for 24 hours. Her history was significant for diabetes mellitus, hypertension and hyperlipidemia, but no prior abdominal surgeries. Physical exam revealed a soft, mildly distended abdomen with significant left lower quadrant tenderness but no rebound or guarding. CT scan was notable for wall thickening at the mid-ileum and focal adjacent mesenteric fat stranding with contained extraluminal air loculi suggestive of perforation. Numerous calcific densities throughout the small bowel were seen and one was visualized almost directly at the site of suspected perforation, raising suspicion for bowel injury due to an ingested foreign object.

The patient was brought to the operating room to undergo an exploratory laparotomy. Upon entrance to the abdomen a moderate amount of purulent ascites was noted and sent for culture. As the bowel was eviscerated, multiple calcific implants were noted along the bowel wall but none in the mesentery or peritoneum. An area of necrotic mesentery at the proximal ileum and a full-thickness perforation leaking succus was noted at the mesenteric side of the bowel. This was resected and a side-to-side functional end-to-end anastomosis was created. Given the unclear source of the diffuse calcific implants and concern for carcinomatosis, a biopsy of an implant separate from the site of perforation was taken and sent as an additional specimen. Postoperatively the patient recovered without complication.

Case Report

Pathology of the resected bowel segment demonstrated ulceration and perforation with acute mesenteric abscess. Additionally, there were noted to be small intramural and subserosal calcified nodules consistent with a diagnosis of localized CFT. The final report listed CFT as the contributing factor leading to perforation.



Figures 1 and 2. Axial and coronal slices from the initial CT demonstrating an area of free intraperitoneal air in the right lower quadrant and multiple calcific nodules in that area.

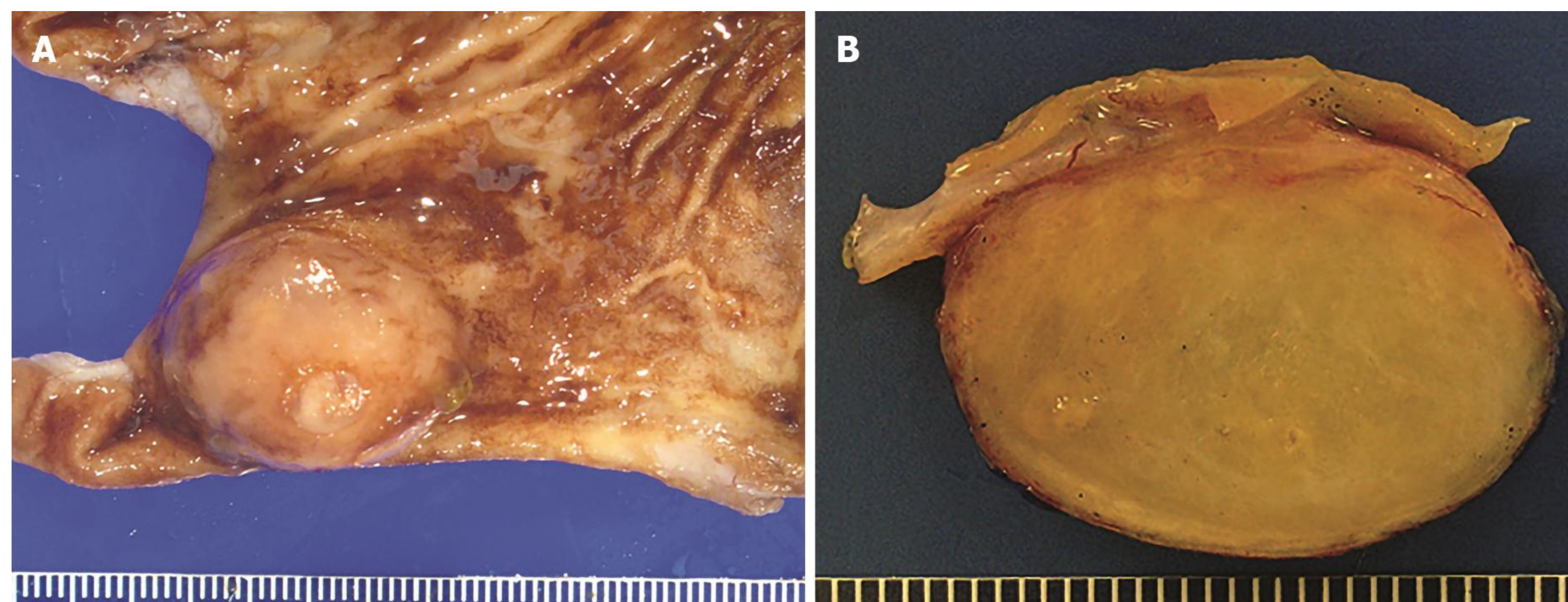


Figure 3. Representative gross pathology of an intestinal calcifying fibrous tumor as seen in Turbiville et al.

Discussion

After an extensive review of the existing literature, we discovered only two other reported cases of intestinal perforation due to CFT. We propose the routine consideration of CFT and other similarly classified lesions on the list of differential diagnoses for acute abdominal pain with evidence of hollow viscus injury. Furthermore, although it is not feasible to perform a complete resection of asymptomatic minor tumors, the low recurrence rate suggests there is minimal benefit in long-term monitoring. Based on this we do not recommend any follow-up imaging beyond standard postoperative care and any symptomatic recurrence should be managed the same as the initial episode.

References

- 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.
- Chorti A, Papavramidis T, Michalopoulos A. Calcifying Fibrous Tumor: Review of 157 Patients Reported in International Literature. *Medicine.* 2016;95:e3690.
- 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.
- Tseng IT, Chen ST, Huang ZZ, et al. Multiple calcifying fibrous tumors in the small intestine and the mesentery. *Formosan Journal of Surgery.* 2012;45(1):33-36.
- Kim DH, Min KW, Kim DH, et al. Traumatic Bowel Perforation and Inguinal Hernia Masking a Mesenteric Calcifying Fibrous Tumor. *J Pathol Transl Med.* 2015;49(3):267-269.
- Valcarcel AQ, Moreno FM, Garcia BM, et al. Intestinal perforation as a form of presentation of a small bowel calcifying fibrous tumor. *Rev Med Chile.* 2023;151:1646-49.