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A rare case of a calcifying fibrous tumor and pathological analysis

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Dear Editor,

A 55-year-old male presented to our outpatient department with complaints of upper abdominal dull pain. Gastroscopy revealed a submucosal eminence at the greater curvature of the gastric body, with smooth surface mucosa (Fig. 1A, white light image) and biopsy pathology indicated inflammation. Physical examination showed no obvious abnormalities, and laboratory results were within the normal range. Computed tomography (CT) showed thickening of the gastric body (Fig. 1B). Endoscopic submucosal dissection (ESD) was performed (Fig. 1C) and representative photomicrographs of histologic sections are shown (Fig. 1D and E).

Finally, the diagnosis of a gastric calcified fibrous tumor (CFT) was made.

Discussion

CFT is a rare benign tumor that often affects children and adolescents. It was first reported by Rosenthal in 1988 and was previously known as a calcified pseudomona (1). CFT most commonly affects the stomach, and its slow growth may not present with any clinical symptoms. Therefore, imaging examinations are important for the initial diagnosis of CFT. Enhanced CT examinations generally show a density mass with an area of high-density calcification. The calcification pattern varies, but often appears as a round, hemispheric or irregular nodular shape that is clear in the surrounding area. The section is gray, with no apparent capsule or an incomplete capsule. The mass is slightly tough and scattered calcification is visible. CFT has characteristic morphological changes, such as dense collagen fibers, a small amount of spindle cells and blood vessels, and the infiltration of lymphocytes and plasma cells in the stroma. This infiltration can form lymph nodes or lymph follicles and is visible as gravel or calcification. In CFT, vimentin is diffuse-positive, while XIIIa factor can be strongly positive and scattered plasma cell IgG 4 is positive in some cases of CFT (2). CFT can be differentiated from a gastrointestinal stromal tumor (GIST) and inflammatory myofibroblastic tumor (IMT). The immunohistochemical markers CD117, CD34 and DOG1 are positive for GIST, and IMT is positive for anaplastic lymphoma kinase (ALK) and a rearrangement of chromosome 2p23 (3). Currently, the main treatment methods for CFT are endoscopic or surgical resection, which have a good prognosis, low recurrence and metastasis rates, and a high cure rate.

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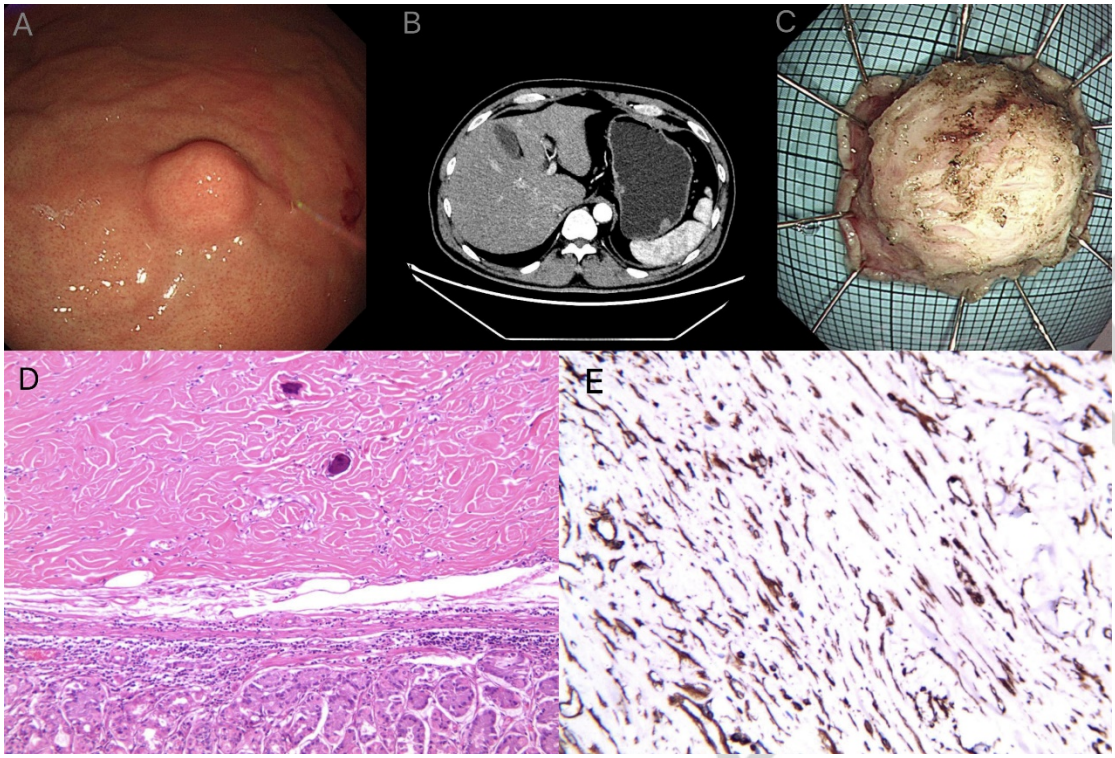

Fig. 1. A. Gastroscopy revealed a submucosal eminence at the greater curvature of the gastric body, with smooth surface mucosa. B. Computed tomography (CT) showed thickening of the gastric body. C. Endoscopic submucosal dissection (ESD) was performed. D and E. Representative photomicrographs of histologic sections are shown (D: 100x objective, HE; E: 100x objective, Vimentin+).