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PICTURES IN DIGESTIVE PATHOLOGY

Diverticulitis of the appendix as debut of appendicular cystadenoma and carcinoid tumor

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CASE REPORT

A 36-year-old man was admitted to the Emergency Room with a four-day-old right lower quadrant pain without signs of peritoneal irritation. A blood test showed 1.57 mg/dl CRP and 9,700 leucocytes/mm^3. CT (Fig. 1) evidenced appendicular diverticulitis in the context of appendicular mucocele. Surgery was decided upon and an open appendectomy was performed, confirming the radiological findings. The patient made good progress and was discharged uneventfully after the procedure. A pathologic study showed an appendicular cystadenoma and a carcinoid tumor associated with inflamed diverticula (Figs. 2 and 3).

Fig. 1. CT coronal reconstruction showing enlarged cecal appendix with thickened walls enhanced after IVC administration. Multiple saccular images are revealed on the appendiceal walls consistent with diverticula, one of them with thickened wall and slightly inflammatory changes nearby. Findings are compatible with appendicular diverticulitis.

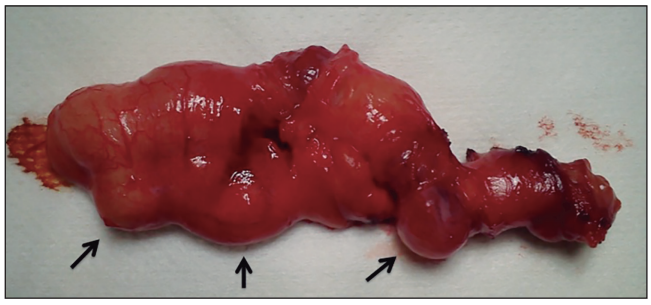

Fig. 2. Surgical specimen from appendectomy. Cecal appendix thickened by 8 x 1.4 cm with multiple sacculations.

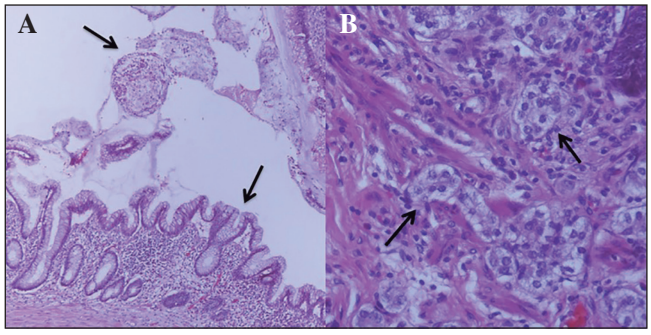

Fig. 3. Pathologic study. A. Inside of the appendix full of mucinous substance and covered by cylindrical mucosecretory highly differentiated epithelium without atypia, compatible with appendiceal mucinous cystadenoma. B. Round nests formed with round uniform-sized nucleus cells without atypia and moderate amount of granular cytoplasm, compatible with carcinoid tumor.

DISCUSSION

Appendiceal diverticulosis is a rare condition, and is sometimes an occasional finding during pathologic study of the surgical specimen (1). It may be presented acutely or as a right lower quadrant chronic recurrent pain, similar to acute appendicitis, so that differential diagnosis must be carried out. Imaging techniques such as CT are unspecific, with preoperative diagnosis being very difficult; however, analysis by experienced radiologists can lead to a diagnosis (1,2). The term "mucocele" is a macroscopic concept (3).

Appendiceal diverticulosis can cause several complications, such as chronic pain, acute inflammation

and perforation, and increased risk of developing neoplasms (1,2).

An association between appendicular diverticulosis and carcinoid tumors or mucinous neoplasm of the appendix has been proved. They could be perforated, leading to pseudomyxoma peritonei (10-15%) (2,3).

Surgical appendectomy is the treatment of choice for appendiceal diverticulitis. It is recommended to perform a prophylactic appendectomy if appendiceal diverticula are found intraoperatively in order to prevent ulterior complications, including a high risk of developing associated neoplasms and pseudomyxoma peritonei (2).

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