Infected appendiceal mucocele presenting as pyrexia of unknown origin

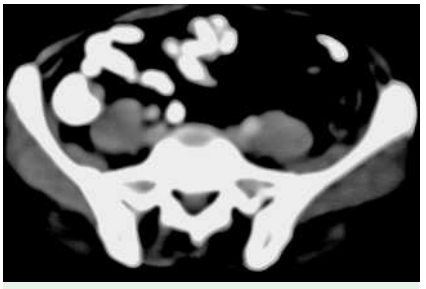

Fig. 1 Computed tomographic scan of the abdomen, showing a smooth, rounded indentation on the medial wall of the cecum.

Fig. 2 Barium study showing indendation at the base of the cecum, along the medial wall.

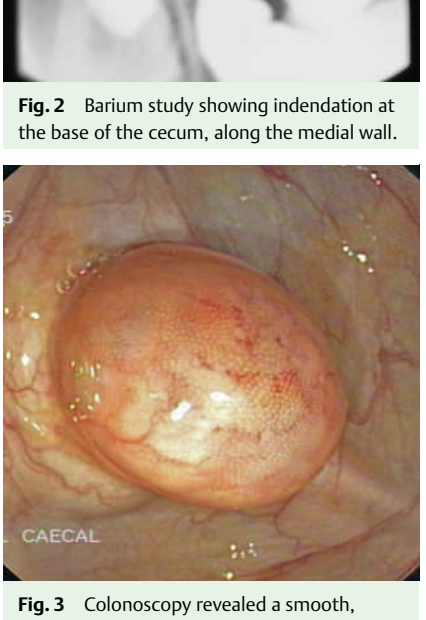

Fig. 3 Colonoscopy revealed a smooth, rounded lesion in the cecum; the appendix is not visualized.

A mucocele of the appendix is defined as dilatation of the appendiceal lumen secondary to a variety of underlying pathological processes. Its presentation as pyrexia of unknown origin (PUO) has not been reported before. A 65-year-old man presented with a 3-month history of high-grade fever. Clinical examination and initial work-up for PUO was unremarkable. Contrast-enhanced abdominal computed tomography detected a well-defined, smooth, hypodense lesion at the base of the cecum (**Fig. 1**). A smooth filling defect, 1.5 cm × 1.5 cm in size, was seen on barium meal and follow through (**Fig. 2**). At colonoscopy, a smooth, indentable bulge (1.5 cm × 1.5 cm) was seen in the base of cecum with normal overlying mucosa (**Fig. 3**); the appendiceal opening was not visualized. When we took a biopsy from the lesion there was a gush of mucopurulent fluid. Culture of this fluid yielded growth of Gram-negative bacteria and anaerobes. The lesion collapsed and the appendiceal opening was then visible and found to be normal (**Fig. 4**). Biopsies of the lesion showed chronic inflammation. After drainage of the fluid and treatment with appropriate antibiotics the patient showed a dramatic reduction in his fever. Histopathological examination of tissue obtained from the appendectomy that was performed 2 weeks later was reported as suggestive of mucocele (**Fig. 5**).

An appendiceal mucocele may be detected incidentally at surgery, during imaging, or at colonoscopy. Barium studies usually reveal a sharply circumscribed, smooth, submucosal or extrinsic mass indenting the cecum without overlying ulceration [1]. An echo-poor mass with an onion-skin appearance is seen on ultrasound [2]. Computed tomography shows a hypodense lesion at the base of the cecum, indenting it on the medial side [3]. The classic colonoscopic appearance is that of the "volcano sign", where there is a mound with a central appendiceal orifice [4].

Colonoscopy has been of limited use for appendiceal disorders. This is possibly the first time that it has had a therapeutic role. This case exemplifies the detection and management of an appendiceal mucocele presenting as a PUO.

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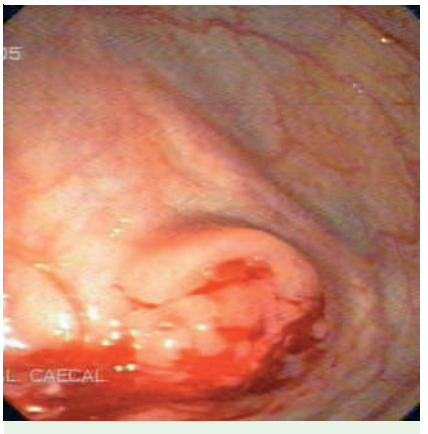

Fig. 4 On biopsy, there was a gush of mucopurulent fluid and the lesion disappeared. The appendix can now be clearly seen in this colonoscopic view, suggesting that the lesion was related to the appendix.

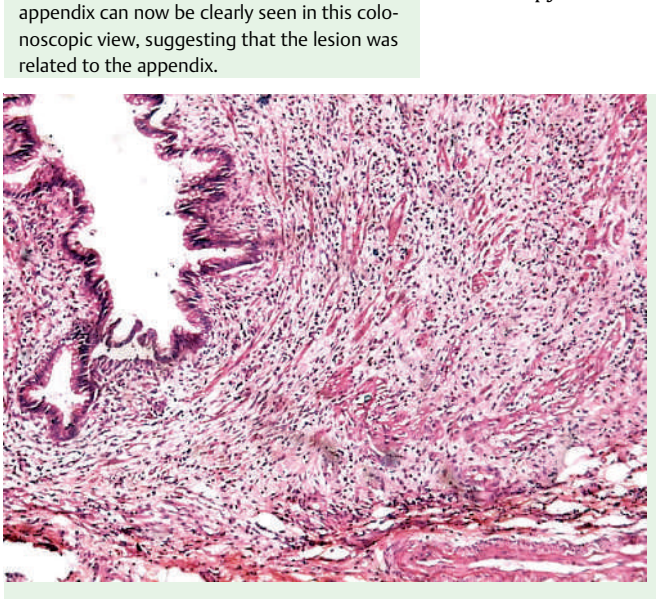

Fig. **5** A low-power photomicrograph of the appendix, showing a mucinous type of epithelium. The lamina propria, submucosa, muscularis mucosa, and serosa are interspersed with pale eosinophilic material (mucin), separating the muscle fibers. As well as the mucin there is dense and diffuse infiltration with chronic inflammatory cells (hematoxylin and eosin stain, original magnification × 140).

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Bibliography
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