Some Stones Are Precious—Extraluminal Appendicoliths

Nishant Gupta¹ · Joshua M. Sapire¹ · Greg Marrinan¹ · Itisha Bansal² · Yogesh Kumar³

Received: 11 July 2016 / Accepted: 13 September 2016 / Published online: 17 September 2016
© Association of Surgeons of India 2016

Abstract Appendicoliths are commonly implicated in the etiopathogenesis of acute appendicitis. Extraluminal appendicoliths are not uncommon and are frequently encountered with ruptured appendicitis. The present image scenario focuses on the importance of identifying and subsequently retrieval of these extraluminal appendicoliths to prevent long-term complications, including intra-abdominal abscess.

Keywords Appendicitis · Appendectomy · Abscess · Appendicoliths · Extraluminal

A 27-year-old female presented to the emergency department with right lower quadrant pain, fever, and vomiting. On examination, the patient was febrile and had right iliac fossa tenderness. Urine pregnancy test was negative. CT scan of the abdomen and pelvis revealed an inflamed appendix, containing a few appendicoliths [Fig. 1]. Additionally, an adjacent small abscess was identified. A closer look at the images revealed a focal defect in the region of the tip of appendix, with a

calcified appendicolith peeping out of the appendicular lumen [Fig. 2]. A diagnosis of acute appendicular perforation and intra-abdominal abscess, with associated extraluminal appendicolith was made. The patient was initially managed with intravenous antibiotics and CT-guided percutaneous abscess drainage. Subsequently, she underwent an interval open appendectomy, along with retrieval of the extraluminal appendicolith.

Appendicoliths are a common cause for appendiceal obstruction and inflammation. Almost always intraluminal in location, these can escape out of the lumen either after appendiceal perforation, or if dropped during appendectomy [2]. Appendicoliths lodge bacteria and, if left unattended extraluminally, can lead to intra-abdominal abscesses [2].

Fig. 1 Axial CT scan of the abdomen and pelvis at the level of appendix reveals a dilated and inflamed appendix with periappendiceal fat stranding. Note the intraluminal appendicolith (*white arrow*) and the calcified extraluminal appendicolith (*black arrow*)

✉ Nishant Gupta
dmgupta20@gmail.com

¹ Department of Radiology and Imaging, Saint Vincent's Medical Center, 2800 main Street, Bridgeport CT 06606, USA

² Resident Anesthesiology, New York Methodist Hospital, Brooklyn, New York, USA

³ Attending Radiology, Yale New Haven Health and Yale School of Medicine, New Haven, CT, USA

Fig. 2 Coronal CT scan of the abdomen and pelvis again reveals an inflamed appendix. A focal defect is identified in the tip of appendix, with a calcified extraluminal appendix peeping out of the tip (*black arrow*). Again identified is the intraluminal appendicolith (*white arrow*)

Extraluminal appendicoliths should eventually be surgically removed to prevent recurrent intra-abdominal abscesses, especially using preoperative image-guided percutaneous localization with a Kopans hookwire, as well as the use of intraoperative x-rays [1]. The purpose of this image scenario is to highlight the importance of managing extraluminal appendicoliths with utmost care to prevent postoperative morbidity.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

References

1. Lossef S (2005) CT-guided Kopans hookwire placement for preoperative localization of an appendicolith. *AJR* 185:81–83
2. Singh AK, Hahn PF, Gervais D, Vijayraghavan G, Mueller PR (2008) Dropped appendicolith: CT findings and implications for management. *AJR* 190:707–711