Appendiceal intussusception from endometriosis: endoscopic and laparoscopic approach

TJ Birriel, E Smith, D Eyvazzadeh

Department of General Surgery, St. Luke's University Hospital, Bethlehem, PA, USA

ABSTRACT

Appendiceal intussusception is an rare diagnosis that may be found on imaging or at the time of surgery, as seen in this case of a 33-year-old female presenting with gastrointestinal symptoms. Images are presented with differential diagnosis as well as treatment options.

KEYWORDS

Intussusception – Endometriosis – Appendix – Colonoscopy –Laparoscopy

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CORRESPONDENCE TO

T Javier Birriel, E: tjkbirriel@gmail.com

Case report

A 33-year-old white female presented with a several months' history of left lower-quadrant pain most notable after menstrual cycles. This was associated with episodes of intermittent loose stools alternating with constipation. Past medical history was significant for hypertension, anxiety and asthma. Previous surgical history includes a tubal ligation approximately 5 years earlier. On physical examination, her general condition was good and her abdomen was soft, although some tenderness was exhibited in the right lower quadrant. Laboratory tests and a urinalysis were grossly normal with a white cell count of of 9,990/mm³.

The patient underwent a colonoscopy as part of the workup for her abdominal pain, at which time a lesion was discovered in the lumen of the appendix (Fig 1). The lesion was suspicious for a polyp or mucocoele, which was benign on superficial cold biopsy. A follow-up abdominal computed tomography (CT) scan showed dilated, thickened appendix impinging on the cecum (Fig 2). After discussion with the patient regarding the possibility of mucocoele, among other diagnoses, she agreed to proceed with a laparoscopic resection. A shortened, thickened appendix and cecum were dissected free from surrounding structures and lateral attachments to the abdominal wall were freed. A laparoscopic partial cecectomy with appendectomy was performed. The specimen consisted of an appendix measuring approximately 5cm in length by 1.7cm in diameter. Final pathology was read as benign appendix with intussusception in the setting of intramural endometriosis. This was negative for dysplasia and malignancy. The patient did well post-operatively and was discharged on hospital day two, tolerating a regular diet.

Discussion

Appendiceal intussusception is an uncommon diagnosis, with an estimated incidence reported by Collins as 0.01%.¹ Clinical presentation of appendiceal intussusception can vary from crampy lower abdominal pain to acute appendicitis.² In this case, the patient had symptoms suggestive of a

Figure 1 Mass at the appendiceal orifice on colonoscopy after cold forceps biopsy

Figure 2 Abdominal computed tomography displaying a dilated, thickened and short appendix measuring approximately 3–4cm × 1.6cm with a low-density material bulging into the cecum at the appendiceal orifice

chronic presentation, with waxing and waning symptoms. Contributing factors to intussusception of the appendix have been classified into anatomical and pathological causes.³ In our patient, the benign appendix with intussusception was in the setting of intramural endometriosis.

Within the 15% of menstruating women in the USA with endometriosis, approximately 5–37% have involvement of

the bowel. Endometriosis of the appendix is even more rare.⁴ The most significant concern with appendiceal intussusception in the setting of endometriosis is the risk of intestinal intussusception.⁵ Although rarely reported, treatment of the condition involves either appendectomy or, in our case, laparoscopic partial cecectomy with appendectomy. This removes the risk of leaving an appendiceal stump and also provides a margin of resection for any lesion within the appendix.¹ The diagnosis of intussusception of the appendix is difficult with the majority of diagnosis being made during or after surgery.¹ Therefore, a history of endometriosis should raise suspicion for the possibility of intussusception.

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