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Case Report

Mesoappendix cyst: a new interesting sequelae of appendicitis

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ABSTRACT

Appendicitis is the most common cause of an emergency surgery. Initially, appendectomy was the preferred treatment for appendicitis, but nowadays there is a growing trend toward conservative management for acute appendicitis. The common complication of appendicitis includes perforation peritonitis, abscess formation, portal vein thrombosis, and superior mesenteric vein thrombosis while formation of mucinous cysts in mesoappendix as sequelae to appendicitis has not been reported in the literature. We, here, present a case of mesoappendix cyst as sequelae of appendicitis in a 26-year-old male.

Keywords: Appendicitis, Conservative treatment, Interval appendectomy, Mesoappendix cyst

INTRODUCTION

Acute appendicitis is a very common disease with a lifetime risk of approximately 7-8%, the highest incidence found in the second decade of life.[1] The common complications of appendicitis include perforation peritonitis, abscess formation, portal vein thrombosis and superior mesenteric vein thrombosis, and have been reported in literature.[2] We, here, present a case of mesoappendix cyst as sequelae of appendicitis in 26-year-old male.

CASE REPORT

A 26-year-old male presented to our emergency department with complaints of pain in the right lower abdomen for 2 days and nausea and fever for 1 day. He had no history of similar complaints. On examination, mild tenderness was present in the right iliac fossa (RIF), and the rest of the abdomen was soft, there was no guarding or rigidity, no lump was felt. His blood investigations revealed, total leucocyte count - 10,500/mm^3 and ultrasonography abdomen revealed, an aperistaltic, blind-ending, non-compressible, tubular structure measuring 8 mm in diameter suggestive of acute appendicitis without any periappendiceal collection. Patient was managed conservatively with intravenous (IV) antibiotics (injection piperacillin + tazobactam 4.5 g IV thrice daily) for 3 days and then discharged home on oral antibiotics after patient's symptoms improved. Patient was then followed up in an outpatient department and worked up for interval appendectomy. On the day of operation, intraoperatively, a cyst measuring 6 cm × 4 cm × 1.5 cm was seen in the mesoappendix (Figure 1). The appendix and the mesoappendix along with the cyst were excised in toto. Longitudinal section of the appendix revealed the cyst communicating to the lumen of the appendix at three points (Figure 2) with mucous discharge on pressing the cyst. Histopathological examination revealed appendicitis with a simple mucinous cyst in mesoappendix.

DISCUSSION

Appendicitis is the most common cause of an emergency surgery. The most frequent cause of appendicitis is thought to be due to fecal impaction causing obstruction and hence the infection. Although appendicitis can occur at any age, incidence is higher in teenagers and young adults and is

Figure 1: Appendix with a cyst measuring 6 cm × 4 cm × 1.5 cm in the mesoappendix.

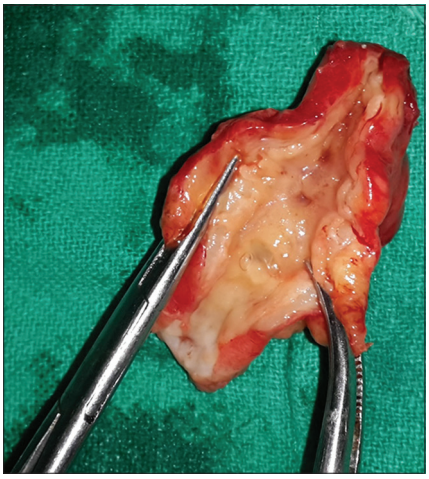

Figure 2: Longitudinal cut open section of the appendix showing three openings of the cyst into the lumen of the appendix with mucous discharge on pressure.

slightly more common in males. Populations with low fiber intake are thought to be at higher risk of developing appendicitis.[3]

The diagnosis of acute appendicitis is mainly clinical, and presentation of acute appendicitis may be typical or atypical. Typical presentation starts with vague periumbilical pain for several hours, which later migrates to the RIF, associated with lack of appetite, nausea, or vomiting. Atypical histories lack this typical progression and may include pain in the right lower quadrant as an initial symptom.[4]

Traditionally, the diagnosis of acute appendicitis was made clinically and appendectomy was the preferred treatment of choice. Recently, these concepts are changing. Alvarado score and ultrasound examination which is operator dependent are often used in diagnosing appendicitis. In doubtful cases, there is widespread utilization of computed tomography scan abdomen, and usage of laparoscopy has reduced the morbidity associated with this disease.[5]

However, the incidence of acute appendicitis requiring an appendectomy has significantly decreased over the past three or four decade, and the trend appears to continue. Some of the decrease in the number of appendectomies are attributable to better diagnosis.[6]

The first prospective randomized study regarding medical therapy for acute appendicitis was performed by Eriksson and Granström in 1995. In that pilot study, 20 patients were treated with antibiotics compared with the remaining 20 having appendectomy. Except for one patient requiring surgery after 12 h, all patients in the medical therapy group were discharged within 2 days. In the 1 year follow-up period, seven patients were re-admitted with recurrence and were operated after diagnosis was confirmed. The authors suggested that the medical therapy could be alternative in high-risk surgical patients.[7]

Pisano et al. suggested, after establishing an institutional validated clinical score, uncomplicated appendicitis in adult can be safely and successfully treated by antibiotics in an in-hospital scenario if the patients accepts pro and cons and is correctly counseled. On the other hand, outpatient antibiotic treatment cannot be proposed as a clinical standard practice. High-risk patient should be treated by antibiotics whilst surgery is to be considered mandatory after conservative treatment failure.[8]

After appendectomy, pathologist usually pays little attention to the gross examination of the mesoappendix in appendectomy specimens in comparison to the appendix itself. Lesions of the mesoappendix are rare. A spectrum of infectious, tumor-like, and neoplastic lesion can involve mesoappendix and periappendiceal tissue.

In a retrospective review study of 4371 appendectomy specimens over 4 years by AbdullGaffar and Keloth showed eight cases (0.18%) with a variety of mesoappendiceal and periappendiceal lesions. Most (5 cases) were benign incidental pathologic findings (lymph nodes with reactive follicular hyperplasia, ectopic deciduas, infracted epiploica and peritoneal cyst), one case was a rare occurrence (inflammatory, fibroid tumor), and two cases were clinically important findings (tuberculosis and schistosomiasis).[9]

CONCLUSION

In conclusion, appendectomy is the most common surgery in an emergency department. Despite mesoappendix lesion being very rare, surgeons should have adequate knowledge about mesoappendicular lesions and pathologist should perform careful gross examination and sectioning of the mesoappendix in order to avoid missing of the important clinical or pathological findings associated with appendectomy specimens.

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