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Case Presentation
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Appendiceal Diverticulitis: A Case Report

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Abstract

Appendiceal Diverticulitis (AD) is a rare and a poorly comprehended appendiceal pathology. AD should be considered in the differential diagnosis of acute appendicitis due to the much higher risk of perforation and associated neoplasia, particularly carcinoid tumors and mucinous adenoma. Although more frequently acquired, AD may be congenital. AD represents one of the main causes of lower abdominal pain which has a similar clinical presentation as acute appendicitis. Diagnosis is usually made at pathology. Some cases were diagnosed on preoperative radiologic imaging. Elective appendectomy is recommended for incidentally detected AD. Pathologic evaluation of appendectomy specimens is mandatory. We report a case of AD that mimics acute appendicitis.

Introduction

Diverticulosis is a common entity that concerns all parts of the gastrointestinal tract. Appendiceal Diverticulitis (AD) is a very uncommon occurrence. AD prevalence varies between 0.014 and 3.7% in the literature [1]. Its clinical presentation may closely resemble that of acute appendicitis, making preoperative diagnosis difficult. Radiological diagnosis of AD can be challenging. In fact, advanced inflammation of the appendix can make it difficult to identify diverticulitis [2]. Adenocarcinomas, mucinous adenomas, tubular adenomas, and neuroendocrine tumors (carcinoids) can all be associated to this condition [3]. Here, we report a case of acute AD diagnosed intraoperatively and confirmed at pathology.

Case Presentation

A 59-year-old male with a history of renal lithiasis presented to the emergency department at our institution with a 2-day history of right iliac fossa pain, associated with nausea and vomiting. There was no burning micturition, bowel disorders or weight loss.

He was hemodynamically stable, with a blood pressure of 131/76 mmHg, a pulse of 70 bpm, and a temperature of 37.4°C.

There was tenderness at the right lower quadrant on physical examination. The abdomen was soft with no palpable mass. There was no abdominal guarding or rigidity.

Biological findings showed raised white cell count (13 × 10^9/L) and high levels of C-reactive protein (55 mg/L). An abdominal ultrasound identified a dilated appendix (12 mm) with thickened, hyper-enhancing wall. We performed laparoscopic appendectomy on the same admission day. Intraoperatively we discovered regional serous fluid, a latero-cecal, inflammatory appendix which presented multiple acutely inflamed diverticula as can be seen in Figure 1, 2.

There were no postoperative complications. The patient was discharged on the first postoperative day. The follow-up consultation planned after two weeks. The patient remained asymptomatic in the follow-up appointment.

The pathological examination confirmed the diagnosis of AD with acutely inflamed pseudodiverticula and peri-diverticulitis. At pathology, there were no signs of dysplasia or malignancy (Figure 3).

Discussion

Kelynack et al. reported the first case of D in [1]. They are small structures (<5 mm diameter) that usually emanate from the distal end and anti-mesenteric surface of the appendix. Congenital (true) diverticula include the muscular layer of the wall and are quite rare (0.014% in the general population), whereas acquired (false) diverticula consist of fewer layers and are more common [4].

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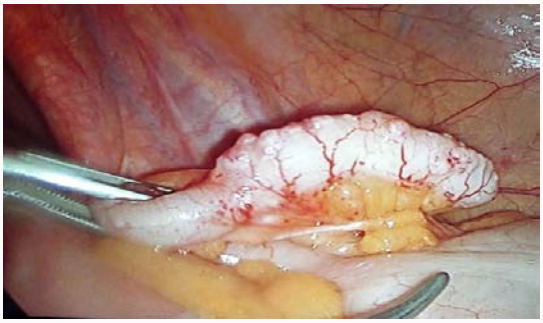

Figure 1: Laparoscopic view of the catarrhal diverticular.

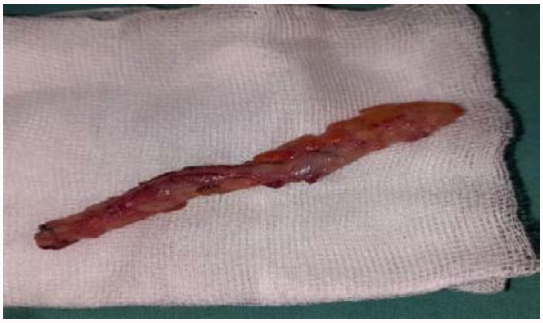

Figure 2: Appendectomy specimen.

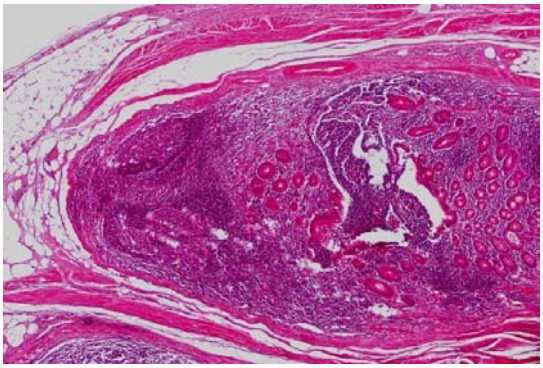

Figure 3: Histopathological images, showing appendiceal. Hematoxylin and Eosin stain (H&E), 40x magnification.

There are several known risk factors, including advanced age, male gender and Hirschsprung's disease [5].

AD is an uncommon condition acquiring up to up to 3.7% [6]. The clinical presentation is quite similar to acute appendicitis. Treatment consists in appendectomy. Therefore, AD is usually diagnosed on pathological examination [7].

Preoperative radiological diagnosis can be challenging [1]. CT scan is more sensitive than ultrasonography in detecting AD lesions [6,7]. The most specific radiological sign is the identification of a diverticula arising from the appendix at the epicenter of the inflammatory change [1,4,5].

Four subtypes of appendiceal diverticula were described. Type 1 is defined by a normal appearing appendix with an acutely inflamed diverticulum. Type 2 includes an acutely inflamed diverticulum with surrounding appendicitis. Type 3 is defined by conventional appendicitis with an incidental finding of non-inflamed diverticulum. Type 4 consists of an incidental appendiceal diverticulum without either appendicitis or diverticulitis [8].

Treatment consists in operative removal, and should not be postponed due to its high rates of perforation and associated morbidity and mortality. Appendiceal diverticulitis should not be treated like classical left sided diverticulitis. elective appendectomy is sufficient. There is no contra-indication in treating appendiceal diverticulitis laparoscopically [8]. Knowing that there is a high association between AD and neoplasia, macroscopic and microscopic examination should be carried carefully [3,7]. AD can be involved in the pathogenesis of appendiceal mucinous tumors [4].

Conclusion

Appendiceal diverticulitis is an uncommon presentation that should be considered in the differentials of acute appendicitis. It's differentiated by the presence of an inflamed diverticulum that can be seen on CT. It increases the risk of appendiceal neoplasm. Therefore, carefully appendectomy specimens should be carefully pathological examination should be systematic.

References

1. Abdullgaffar B. Diverticulosis and diverticulitis of the appendix. Int J Surg Pathol. 2009;17(3):231-7.
2. Lee KH, Lee HS, Park SH, Bajpai V, Choi YS, Kang SB, et al. Appendiceal diverticulitis: diagnosis and differentiation from usual acute appendicitis using computed tomography. J Comput Assist Tomogr. 2007;31(5):763-9.
3. Dupre MP, Jadavji I, Matshes E, Urbanski SJ. Diverticular disease of the vermiform appendix: A diagnostic clue to underlying appendiceal neoplasm. Hum Pathol. 2008;39(12):1823-6.
4. Yardimci AH, Bektas CT, Pasaoglu E, Kinaci E, Ozer C, Sevinc MM, et al. Retrospective study of 24 cases of acute appendiceal diverticulitis: CT findings and pathological correlations. Jpn J Radiol. 2017;35(5):225-32.
5. Chia ML, Chan SWY, Shelat VG. Diverticular disease of the appendix is associated with complicated appendicitis. GE Port J Gastroenterol. 2021;28(4):236-42.
6. Drew ZJ, Chakrabarty S, Malghan R. Complicated appendicular diverticulitis. J Med Radiat Sci. 2022;69(3):407-10.
7. Ergenç M, Uprak TK. Appendiceal diverticulitis presenting as acute appendicitis and diagnosed after appendectomy. Cureus [Internet]. 2022;14(3):e23050.
8. Heffernan DS, Saqib N, Terry M. A case of appendiceal diverticulitis, and a review of the literature. Ir J Med Sci. 2009;178(4):519-21.