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Torsion of appendices epiploicae (appendagitis) presenting as appendicitis: laparoscopic diagnosis and therapy

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Abstract:	<p>Epiploic appendagitis is a rare cause of acute abdomen. depending on the onset point, it can imitate every cause of acute abdomen, colon disease and caecal appendicitis, making the pre-operative diagnosis extremely difficult. The case of a young woman that came at the emergency department with a pain in the iliac fossa will be examined hereinafter. At first the case has been incorrectly interpreted as an acute appendicitis and suddenly, after the surgical exploration, she has been found affected by caecal appendicitis. The epiploicae appendix has been removed together with the vermiform appendix through laparoscopy. We will check the related literature too and discuss the ways to solve this diagnostic dilemma. General surgeons must be aware of this disease and consider it in the differential diagnosis of the acute abdomen.</p>

Torsion of appendices epiploicae (appendagitis) presenting as appendicitis: laparoscopic diagnosis and therapy

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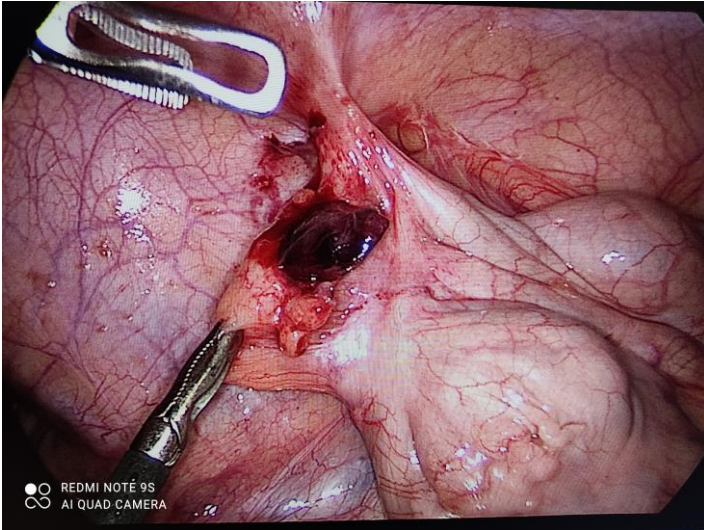


Fig. 1 : Neoplasm adherent to the intestinal wall (cecum)

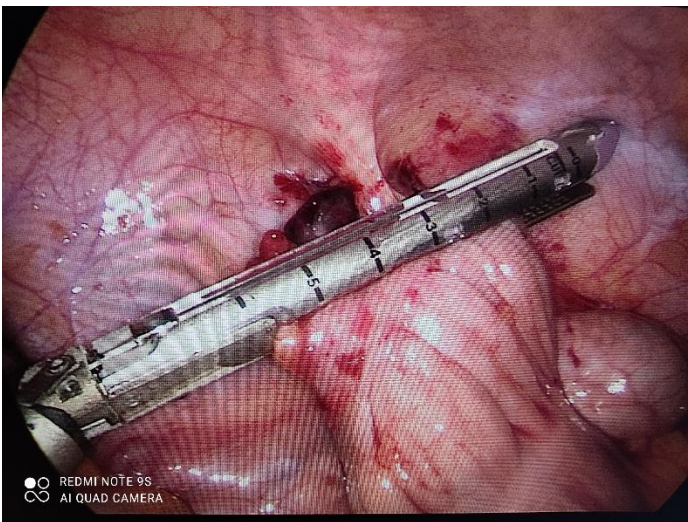


Fig. 2 : Resection in block of the neoplasm with a part of the intestinal wall with a laparoscopic linear stapler

Abstract

Epiploic appendagitis is a rare cause of acute abdomen. depending on the onset point, it can imitate every cause of acute abdomen, colon disease and caecal appendicitis, making the pre-operative diagnosis extremely difficult. The case of a young woman that came at the emergency department with a pain in the iliac fossa will be examined hereinafter. At first the case has been incorrectly interpreted as an acute appendicitis and suddenly, after the surgical exploration, she has been found affected by caecal appendicitis. The epiploicae appendix has been removed together with the vermiform appendix through laparoscopy. We will check the related literature too and discuss the ways to solve this diagnostic dilemma. General surgeons must be aware of this disease and consider it in the differential diagnosis of the acute abdomen.

Keywords: caecal appendicitis, appendices epiploicae, torsion, acute appendicitis, epiploic appendagitis, acute abdomen

Introduction

Appendagitis epiploic is a rare cause of acute abdominal pain. When it presents, it often mimics other causes of acute abdominal pain. A diagnosis of appendagitis epiploic should remain on the list of differential diagnosis for acute abdominal pain. It is important for clinicians to be aware of an appendagitis epiploic since a delay in diagnosis can lead to an unnecessary hospitalization, antibiotic use and surgical intervention. We present a case of appendagitis epiploic mimicking acute appendicitis.

Case report

A twenty-four years old young woman came at the emergency department suffering pain in the right iliac fossa for about twenty-four hours. The anamnesis reported a irregular menstrual cycle and suspected endometriosis, while at the abdomen clinical examination the patient presented pain at the moment of deep palpation in the lower right quadrant abdominal with initial signs of peritonism. The white blood cell count was 11.200 leukocytes /mm³. The abdominal ultrasound revealed free fluid in the Douglas zone. A gynaecological referral was made for possible torsion of an ovarian cyst. No discharge was evident. By suspecting an acute appendicitis a diagnostic laparoscopy was being effectuated. In the intra-abdominal zone the walls of the appendix appeared thickened as if there was an ongoing chronic inflammation. A brownish, thick lesion of about 1.5cm stricktly adherent to the intestinal wall was evidenced in correspondence of the cecum (Fig. 1). By suspecting an indometrial implantation on the caecal wall, we proceeded to resect in block the neoformation with a part of the intestinal wall with a laparoscopic linear stapler (Fig. 2). Simoultaneous appendectomy. The patient recovered uneventfully, and he was discharged after two days. Histology indicated an infarct of the epiploic appendage. The vermiform appendix appeared to be affected by chronic inflammation.



Fig. 1 : Neoformation adherent to the intestinal wall (cecum).



Fig. 2 : Resection in block of the neoformation with a part of the intestinal wall.

Discussion

1 The epiploicae appendix are small fat bags that protrude from the serous surface of the Colon, axially
2 located from the caecal to the rectum sigmoid. Vesalius first described their anatomy in 1543 [1]. They
3 are arranged in two rows: anteriorly along the taenia libera and posterolaterally along the taenia
4 omentalis, except for the transverse colon, which contains only one row as the greater omentum attaches
5 to the taenia omentalis. Usually in number from 50 to 100, they are placed in two row, lengthwise along
6 the free taenia and the omentalis, [1]. Their length varies from 0,5 to 5 cm. The epiploic deployment is
7 moderate in the ascending and descending colon, whilst the most part is usually found in the traverse
8 and the sigmoid colon [2]. They are supplied by 1 or 2 small arteries originating from the colonic vasa
9 recta, and drains into veins with narrow pedicles [3]. Epiploic appendages are assumed to serve as
10 protective cushions of colons during peristalsis or a defensive mechanism, similar roles to the greater
11 omentum [3]. Epiploic appendicitis is the ischemic infarction of epiploic appendage secondary to torsion
12 or spontaneous thrombosis of the central draining vein [3]. The exact cause of the torsion remains
13 unknown . It can develop as a consequence of the sudden rotation of the body, or it might be due to an
14 overlong peduncle as well as to the vein that, being longer than the accompanying artery, may rotate
15 around it, causing a strangulation. The inflammation of these epiploic appendages, also named
16 appendagitis epiploic, is a really rare cause of acute abdomen. Appendagitis epiploic can be primary or
17 secondary. Primary appendagitis epiploicis caused by torsion when the appendage is long and large.
18 Secondary epiploic appendagitis caused by adjacent inflammatory pathologies such as diverticulitis or
19 appendicitis [4]. Epiploic appendages are enlarged in obese patients, which increase their risk for
20 torsion. Depending on the localisation, it can imitate any cause of acute abdomen. On the most part, the
21 epiploic appendagitis involve the sigmoid colon and can imitate a diverticulitis. If it involves the caecal
22 intestine it can simulate an acute appendicitis or any other cause of acute pain in the lower right abdomen
23 such as regional enteritis, ovarian torsion, salpingooforitis, typhylitis, pertiphylitis [5] and ruptured
24 diverticle of the appendix [6]. Pain is the most common disturb and may be acute or intermittent /
25 prolonged where the torsion spontaneously solves and occurs again. The count of the white blood cells
26 is generally normal or just slightly high [7]. Ultrasound findings include hyperechoic non-compressible
27 pericolonic mass, frequently surrounded by a hypoechoic border. CT scan may show a hyper-attenuated
28 ring with adjacent fat stranding or a lobulated fatty mass [8]. A diagnostic laparoscopy remains an
29 accurate, safe and cost effective means of diagnosis which provides simultaneous therapeutic options at
30 no increased expenditure . Appendagitis epiploicis usually a self-limiting condition that can be managed
31 conservatively with oral anti-inflammatory medications . Surgical excision, particularly laparoscopic,
32 should be considered in cases of uncertain diagnosis, persistent symptoms, or recurrence.
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