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RETROPERITONEAL APPENDICITIS: A RARE CASE REPORT

Medical Science

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ABSTRACT

Retroperitoneal appendicitis as the appendix is located in the retroperitonealy, its symptoms and signs are not typical, clinical diagnosis is difficult. Acute appendicitis is frequently encountered in both the surgical OPD and emergency. But, a retroperitoneal (Retrocolic) appendicitis is very rarely seen and the literature available on it is barely.

KEYWORDS:

Retroperitoneal appendix, Appendicitis, Abnormal positions of the appendix.

INTRODUCTION:

Documented cases of retroperitoneal appendix are rare to the best of our knowledge and should be kept as a differential diagnosis when a patient presents with atypical features of appendicitis.

We present a case of a 46 years old male who presented to the OPD room with features of appendicitis and on whom an appendicectomy was done. But during the surgery, the appendix was found situated retroperitoneally and had to be removed via a retrograde approach. We followed it with a short discussion of retroperitoneal appendix, the presentation of retroperitoneal appendicitis and its surgical management.

CASE REPORT

A 46-year-old male presented to our hospital OPD room with an h/o low back ache since 6 days, pain in the right lower abdomen since 4 days. He revealed that he had similar episodes in the past which subsided after taking over the counter analgesics.

On examination her temperature was 100°F, pulse was 110/min, blood pressure was 124/78 mm Hg. Per abdomen examination elicited mild tenderness in the right iliac fossa (RIF). Psoas sign was positive. Rest of the systemic examination was unremarkable. Laboratory values revealed an Hb of 11.4 gm%, a total count of 7,500 cells/cumm and a differential count of 51% polymorphs and 49% lymphocytes. Urine microscopy showed 3 to 5 pus cells/hpf. Rest of the laboratory values were within their respective normal parameters. An ultrasound of the abdomen showed no collection in the RIF but the appendix was not visualized. Due to poor financial status of the patient, we were unable to perform a computed tomographic (CT) scan of the abdomen.

A provisional diagnosis of acute appendicitis was made with urinary tract infection as the main differential. The patient was admitted and managed conservatively on analgesics and intravenous antibiotics for 1day. Despite this there was only a minimal reduction in the patient's symptoms.

The patient was posted for a laparoscopic appendectomy for the following day. During surgery, minimal collection of fluid was noted in the RIF, but the appendix was not visualised. Consequently, conversion to open approach was made due to limited resources, the caecum was mobilized by opening the lateral peritoneal reflection which revealed the appendix situated retroperitoneally .There was edema present of the surrounding retroperitoneal structures. The appendix was around 7 cm in length, mild inflamed, but intact with no signs of rupture. The base of the appendix was healthy. As the tip of the appendix was adhered to adjuscent tissue, a retrograde appendectomy was performed and the appendix specimen was sent for a histopathological examination. The biopsy report are consistent with late/healing phase of acute appendicitis. Abdominal drain was placed, patient was nil by mouth for the next 24 hours, after that patient allowed for liquid and thereafter solid food and drain was removed. The postoperative recovery of the patient was uneventful. He was discharged after 5 days and reviewed in the surgical OPD 3 days later for suture removal.

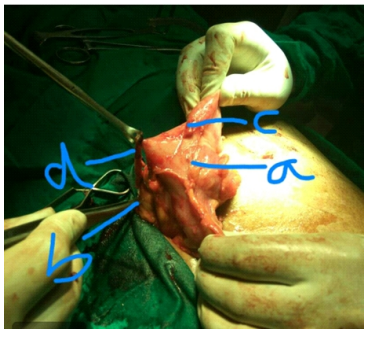

Fig. 1: Reflection of the peritoneum after mobilizing the cecum, (A) cecum, (B) peritoneal reflection, (C) distal ileum, (D) appendix

DISCUSSION

It was Reginald Fritz who first coined the term appendicitis in 1886 and recommended early surgical treatment for the disease[1]. The appendix is located at the convergence of the tenia along the inferior aspect of the cecum. The tip of the appendix may lie in a variety of positions. The most common location is retrocecal 77%. It is pelvic in 30% and retroperitoneal in 7% of the population[2]. These anatomic variations might be responsible for atypical presentations of appendicitis[3]. There may be a congenital absence of the appendix which is very rare and seen approximately in 1/1,00,000 laparotomies[4].

A retroperitoneal appendix is relatively liable to disease because it is cut off from direct superior mesenteric circulation[5]. The onset of pain usually begins in the epigastrium, nausea and vomiting is frequently noted, but pain at McBurney's point is modified or absent[6]. On physical examination the classical sign for a retroperitoneal appendix is the iliopsoas sign where the patient has pain on the extension of the right hip. Other signs which are useful but seldom elicited include:

1. *Dunphy's sign*: Pain on coughing.
2. *Rovsing's sign*: Pain in RIF on palpation on the left iliac fossa.
3. *Obturator sign*: Pain in the hypogastrium on internal rotation and flexion of hip suggestive of a pelvic appendix.
4. *Pointing sign*: Here, the patient is asked to show where the pain first migrated and where it subsequently migrated. The white cell count is elevated with a predominantly neutrophilic picture. A completely normal count and differential is seen in 10% of the cases[7]. Minimal pyuria may be present as the infected appendix may come in contact with the ureter and cause its inflammation[8]. Ultrasound with a sensitivity of 85% and a specificity of >90% is the preferred imaging modality in children[9] while a CT scan is best in adults and in the elderly[10]. It is hazardous to remove the appendix through the normal incision used in appendicectomy because there is high probability of rupturing the appendix. When the appendix is retrocaecal and adherent[11] or otherwise inaccessible, appendicectomy is done in a retrograde fashion. Firstly, the base is divided between artery forceps. The appendiceal vessels are then ligated, the stump ligated and invaginated, and gentle traction on the caecum will enable the

surgeon to deliver the body of the appendix, which is then removed from base to tip A laparoscopic appendicectomy is not possible either as the tip of the appendix is not visualized. In these cases, a retrograde appendectomy is the surgery of choice where the appendix is approached and isolated via a lateral peritoneal incision after mobilizing the right colon.

CONCLUSION

The presence of a retroperitoneal appendix should be on a surgeons mind when dealing with a patient with abdominal pain with atypical features of appendicitis and a retrograde appendectomy is the surgery of choice for a retroperitoneal appendix.

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