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Case Report

An unusual case of difficult appendicectomy

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ABSTRACT

Vermiform appendix is a tubular lymphoid organ situated about 2 cm below the ileocecal junction on the caecum. The different anatomical positions of the appendix is due to differential growth of the caecum at the time of development. Appendix is now considered to be an important part of the immune system with a distinct function within the gut associated lymphoid tissue and also has a role in bowel repair. Acute appendicitis is probably the most common surgical emergency in the world. Post-ileal appendicitis does not have usual symptoms and signs of appendicitis which makes it difficult for diagnosis and increases the rate of complications. We presented such a case of post-ileal appendicitis which led to a difficult appendicectomy.

Keywords: Vermiform, Post-ileal, Appendicitis, Ileocaecal, Difficult, Appendicectomy

INTRODUCTION

Vermiform appendix is a tubular lymphoid organ situated about 2 cm below the ileocecal junction on the cecum. The different anatomical positions of the appendix is due to differential growth of the cecum at the time of development. These different positions are retrocecal (74%), pelvic (21%), paracecal (2%), subcecal (1.5%), pre-ileal (1%), and post-ileal (0.5%).[1]

Appendix is now considered to be an important part of the immune system with a distinct function within the gut associated lymphoid tissue (GALT), which is different from lymphoid tissue in other parts of the intestine. It influences GALT by stimulating its development and helps in recovery after diarrhoeal illness by recolonizing the colon with commensal flora. Hence, it is also called the abdominal tonsil. Existence of the appendiceal biofilm has proved to have a beneficial effect for the entire gut.[2]

Acute appendicitis is probably the most common surgical emergency in the world. Usually, for incidence of acute appendicitis, male to female ratio is 2.8:1. The appendicitis mostly presents with pain in the epigastrium or paraumbilical region migrating to the right iliac fossa. It is associated with nausea, vomiting and fever. Different positions of the appendix as well as different age-groups are responsible for variable signs and symptoms of acute appendicitis. The typical features of appendicitis may be absent in the post-ileal appendicitis. The patient may present with diarrhoea and marked retching with migration of pain being absent. This may cause delay in diagnosis and further complications.[3]

We presented a case of post-ileal appendicitis which had misleading symptoms and signs which finally underwent successful appendicectomy.

CASE REPORT

A 16 year old female patient presented with diarrhoea for one day with multiple episodes of loose stools. There was no pain abdomen, fever or vomiting. As per available hospital records, the patient previously had 2-3 similar episodes in last one year prior to which she had no

symptoms. She was treated in the line of diarrhoea and she got cured.

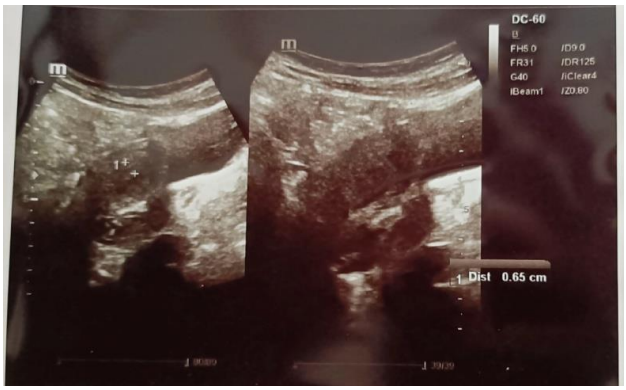

Figure 1: Ultrasonographic findings of the case.

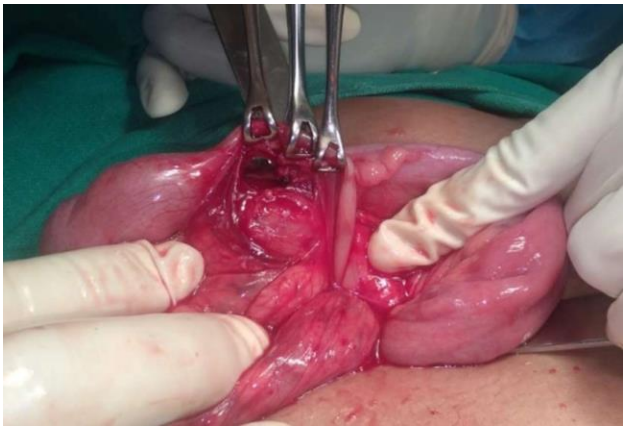

Figure 2: Appendix (white arrow) buried within loops of ileum (black arrow) with the base of the appendix being visible (green arrow).

Initially, she was admitted and given treatment in the line of diarrhoea with antibiotics and ORS. On the second day of admission, she developed right lower abdominal pain with the score of 5 on the visual analogue scale. On examination, a soft and smooth lump of size 3×2×2 cm (approx) was palpated in the right iliac fossa with mild tenderness. The lump did not move with respiration. There was no fever or vomiting. Cope-psoas and cope-obturator tests were negative. Total leucocytic counts were normal and modified Alvarado score was 1. On abdominal ultrasonography, there was no evidence of lump. However, the impression was that of recurrent appendicular pathology with appendix diameter of 4.1 mm and no periappendiceal fluid (Figure 1).

On exploration by Mcburney's grid-iron incision, the only the base of the appendix was found with difficulty by tracing the taenia coli as the entire appendix was buried in between loops of ileum. Initially, gentle dissections were made to completely expose the base which is then ligated and separated from the caecum (Figure 2). Following this, the appendix and mesoaapendix was together separated from the loops of small bowel by gentle dissections. Mesoappendix was ligated and separated from the appendix (Figure 3). Finally, when the tip and majority of the body of the appendix were separated from the mesoappendix, the final attachment between appendix and mesoappendix was separated and the appendix was taken out (Figure 4). Specimen was sent for histopathology which gave the impression of chronic appendicitis. Post-operative recovery was uneventful.

Figure 3: Appendix base (black arrow), body (green arrow) and tip (white arrow) being separated from the mesoappendix (yellow arrow).

Figure 4: Specimen of the appendix.

DISCUSSION

A study showed that complication of appendicitis like gangrene, perforations, abscess, mass formation or generalized peritonitis was seen mostly in patients with retro-caecal followed by pelvic and then post-ileal appendicitis. There was any relation of position of appendix to get inflamed but it influences the clinical presentation. In post ileal appendicitis, signs and symptoms were subtle and ususual which led to atypical presentation which leads to delay in diagnosis and increased complications.[4] Another study showed that in paediatric population, post-ileal appendix had highest rate of surgical site infection (42.3 percent) followed by retrocaecal appendix (36.7 percent).[5]

In another study, the following frequencies for different positions of appendix were obtained: retrocecal (43.5 percent), sub-caecal (24.4 percent), post-ileal (14.3 percent), pelvic (9.3 percent), paracecal (5.8 percent), pre-ileal (2.4 percent) and other positions (0.27 percent). The length was documented from 1.0 to 20 cm with a mean length of 11.4 cm.[6] Diagnosis was based on history, clinical examination and laboratory investigations. About 30-45 percent of patients present with atypical signs and symptoms on presentation. Where the diagnosis remains equivocal, ultrasonography and CT scan were the most widely used imaging modalities.[7]

CONCLUSION

Post-ileal appendicitis is an unusual case of difficult appendicectomy which sometime presents with unusual signs and symptoms with complications if delay in diagnosis happens.

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