



MALFORMATION OF GUT WITH LEFT SIDED APPENDICITIS- A CASE REPORT

Radiodiagnosis

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ABSTRACT

Appendicitis is an acute abdominal emergency that is caused due to inflammation of the vermiform appendix. It is more common in the younger age group of 10-19 years. The typical presentation of appendicitis is a pain in the abdomen's right side, nausea, vomiting, and anorexia. However, 30% of the cases can present with atypical symptoms. In case of mal rotation of gut, appendicitis presented with left-sided abdominal pain due to the congenital malrotation of the gut. Meticulous clinical evaluation and selection of appropriate imaging technique help in the diagnosis of such the case and provision of appropriate care.

KEYWORDS

Appendicitis, Malrotation, Abdominal pain

INTRODUCTION

Appendicitis is inflammation of the vermiform appendix. It is caused by obstruction of the appendicular lumen leading to a progressive cycle of pathologic changes. Acute appendicitis is one of the most frequent causes of abdominal pain in emergency department. The incidence of appendicitis gradually rises from birth, peaks in the late teen years and progressively declines. It is most prevalent in the 10-19-year-old age group. (1) In recent years, the number of cases in patients aged 30-69 has increased to 6.3%. (2)

Typical presentation includes periumbilical pain radiating to the right lower quadrant with a peritoneal reaction on palpation, fever and anorexia. However, several atypical presentations have been reported and included backache, (3) left lower quadrant pain, especially in situs inversus, (4) Groin pain from a strangulated femoral hernia containing the appendix. (5) The diagnosis is often confirmed by abdominal ultrasound and computed tomography. The definitive treatment is analgesics to relieve the pain and inflammation followed by complete surgical removal of the organ.

We report a case report of a patient presenting with complaint of pain in left flank and diagnosed as Congenital malformation of gut with left sided appendicitis

Case Presentation

A 50 years old male presented to the emergency department of Justice K S Hegde Charitable hospital, Mangaluru on 16.09.2020, 6.30 pm with chief complaints of pain in the left flank and vomiting for three days.

Pain was incedious in onset and was dull aching, non radiating. Vomiting was sudden and vomitus consisted of food particles. He also complained of fever since one day, nausea, and anorexia. There was no history of blood in the urine or burning during micturition. There was no history of trauma or other infections.

Patient is an non Hypertensive and non diabetic and there were no past history of similar complaints or any surgeries. Patient had no history of any allergies. None of the family members had similar complaints. His bowel and bladder movements were regular and sleep was not disturbed. He had consulted a local doctor and was prescribed some anti-inflammatory drugs but his symptoms had not subsided.

On general physical examination, patient was afebrile, Pulse rate was 82bpm, BP was 128/82 mm of Hg, Oxygen saturation was 98%. There were no signs of pallor, icterus, clubbing, cyanosis, lymphadenopathy or edema.

On abdominal examination, tenderness and gaurding was present in left iliac fossa. No other abnormalities were found in any other systematic examination.

Examining doctor advised for routine blood investigations and ultrasonography. Advised adequate fluid intake, anti-inflammatory and

antibiotics in the interim. Blood was collected in the same day for investigations. Complete haemogram showed increase in neutrophil count (77%) and decrease in lymphocyte count (18%) while total leucocyte count remained normal (8000). All the other blood parameters were within normal range.

USG of abdomen was conducted on 19.09.2020 an oedematous inflammatory blind ended structure in the left iliac fossa and bowel loops in the right iliac fossa. There was no fluid collection in the pevic cavity. The features were suggestive of Congenital malformation of intestinal fixation. A plain and contrast (oral & IV) CT scan of the abdomen in a spiral mode was conducted on 21.09.2020 to confirm the diagnosis. Duodenojejunal flexure is seen on the right side. Small bowel loops are predominantly seen on the right side, and big bowel loops on the left side with the superior mesenteric vein transversing anterior to the superior mesenteric artery (SMA). The caecum was in the left iliac fossa confirming malrotation of the gut. Acute appendicitis in the left iliac fossa was confirmed on CT scan.

Patient underwent laproscopic appendectomy on 23.02.2020. The histopathology report of the specimen confirmed the diagnosis of appendicitis. Patient was discharged from the hospital on successful reduction of symptoms.



Figure 1: CT findings

Axial and coronal contrast enhanced CT scan shows inflamed appendix and ileocecal junction on left side and malrotation of gut.

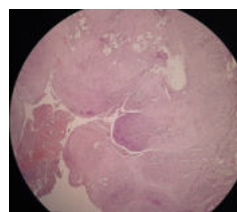


Figure 2: Histopathology image

Histopathology images shows appendix with extensive denuded epithelium. The lamina propria, submucosa and serosa is congested with transmural infiltration by neutrophils.

DISCUSSION

The differential diagnosis of left iliac fossa pain is acute gastroenteritis, sigmoid volvulus, inguinal or femoral hernia, pelvic

inflammatory disease, testicular torsion and appendicitis. (6) Appendicitis is a rare cause of left iliac fossa pain(3) and is seen only in cases of malrotation of the gut.

The alimentary tract develops from the embryologic foregut, midgut, and hindgut. The gut rotation takes place around the SMA as the axis to form the adult alimentary canal. Malrotation can be of three types a) Non-rotation in which there is no rotation, and the left structures of the alimentary canal occur in the left and vice versa b) Incomplete rotation in which the gut rotates incompletely and c) Incomplete fixation in which although the gut rotates the fixation of the gut entirely to the peritoneum does not occur. (7) In our case, there was left-sided pain due to appendicitis and it is a rare finding. Similarly, Collins D, in their study that the incidence of appendicitis in situs inversus totalis is 0.016%. (8) Also, Sim et al. reported a similar finding of appendicitis in the left iliac fossa in their case report. (9)

Appendicitis is an acute abdominal emergency that is caused due to inflammation of the appendix. It is more common in the younger age group of 10-19 years(10). Rarely it may present in older people as in our case. Most common appendicitis presentation is pain in the abdomen, nausea and vomiting, anorexia, guarding and rigidity in the abdomen. (4) It is diagnosed with the help of imaging studies, namely ultrasonography. If USG comes inconclusive, then the CT scan is used for confirmation of diagnosis. Other laboratory findings like increased WBC in CBC and high inflammatory markers help in supporting the diagnosis. In our patient, USG reported features suggestive of Congenital malformation of gut with left sided appendicitis as against the results found by Sekhar et al. (11), who failed to diagnose appendicitis in a ten-year-old child with USG. However, CT was conducted to confirm the diagnosis.

The complication of appendicitis includes abscess and perforation. Management of appendicitis includes conservative management with antibiotics and analgesics to decrease inflammation. Definitive treatment includes surgical excision of the appendix.

CONCLUSION

High degree of suspicion and timely investigations are crucial to diagnose Congenital malformation of gut with left sided appendicitis and provide right care.

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