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Various unusual presentation of acute appendicitis in adult. A case series

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ABSTRACT

Acute appendicitis is common abdominal condition in our day to day surgical practice. Classical features include periumbilical pain that migrates to the right iliac fossa, anorexia, fever, and tenderness and guarding in the right iliac fossa. However, in our present study, three atypical presentation of acute appendicitis is demonstrated in clinical practice. These three cases do not have classical features of murphy's triad, that is, nausea, vomiting, fever, and cardinal sign of positive Mcburney's tenderness. Our three atypical cases are: (1) A 38 year old obese male patient who presented with features of umbilical inflammation with serous discharge due to presence of acute inflamed appendix in pre-existing small umbilical hernial sac. (2) A 49-year-old male medicine seller presented right sided scrotal pain with same sided inguino-scrotal swelling for short duration due to presence of inflamed swollen tip of appendix at bottom of right hemi-scrotum in pre-existing inguinal hernia. (3) A 81-years-male gentleman presented with anorexia, weakness, abdominal fullness, and bilateral pedal edema. He did not have pain abdomen, fever, and right iliac fossa tenderness. Imaging modalities confirmed the acute appendicitis in three cases. Diagnosis of appendicitis in absence of typical features is to be made from pre-occupied knowledge and with help of imaging studies.

Key words: Acute appendicitis; Amyand's hernia; Murphy's traid and umbilical hernia; Elderly individual

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INTRODUCTION

Incarceration of the appendix in the inguinal sac is known as Amyand's hernia and can present with or without acute appendicitis.[1]

It was first described by Claudius Aymand in 1735 in an 11-year-old boy, and this condition remains rare with an incidence of around 0.5–1%.[2] Even rarer is the presentation of acute appendicitis within the inguinal sac, with an incidence of around 0.1%.[2] Herniation of appendix through umbilicus is extremely uncommon only 10 such cases are available in medical literature.[3] Acute appendicitis is an uncommon gastrointestinal disease in the elderly. When it strikes an older patient, the presentation usually is atypical. When caring for older patients who present with abdominal complaints, acute appendicitis should be included in the differential diagnosis. We present such a case series with the hope that we increase awareness about this uncommon condition, in which pre-operative diagnosis and planning remains difficult and that reduce the morbidity and mortality.[4]

CASE 1

A 38-year-old deaf and dumb patient presented to our clinic with pain, swelling and serous discharge from his umbilicus. His elder sister reported a small umbilical reducible swelling was there before this problem. His elder sister denied any other symptoms including fever, nausea, vomiting, diarrhea, constipation, and urinary changes. He worked as a labor. He had a previous history of varicose vein surgery in the right lower limb about 10 year ago. He did not take any regular medicine. Physical examination revealed a obese male in mild pain with pulse rate 80 beats/min, blood

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pressure 130/78 mm of hg, temperature 99° Respiratory rate of 18 breaths per minute, SpO_2 95% and a BMI of 32.2 kg/m^2. On examination, obese soft abdomen with a firm, tender swelling in everted umbilicus with overlying skin erythema, patchy ulceration, and serous discharge was noted. There was no organomegaly, peristaltic sounds were heard normally. Auscultation of heart and lung was normal.

Laboratory evaluation was within normal limits, with mild leukocytosis. Ultrasonography (USG) of abdomen revealed umbilical hernia containing suspected intestinal lumen in the sac. But patient did not have any features intestinal obstruction. Depending on USG findings and patient's pain, umbilical findings, decision was undertaken for urgent exploratory laparotomy. After admission optimization was done with intravenous isotonic fluids, inj. ceftriaxone, metronidazole, and Foley's catheterization. Appropriate counseling and consent taken. Incision is made in supra umbilical transverse curvilinear and deepened up to neck of the hernial defect. Superior part of sac was dissected bluntly and opened. A tubular blind ended inflamed appendix was identified. Hernial defect was extended laterally in one side for examining adjacent bowel. Appendicectomy was performed. Hernial defect's width was 2 cm and defect margin was dissected in all around. Anatomical closure and darning by polypropylene suture were performed. Clean-contaminated wound was washed thoroughly after that wound was closed keeping a corrugated drain subcutaneously. Catheter and drain were removed gradually with uneventful post-operative recovery. Patient was discharged on 3rd post-operative day Figure 1.

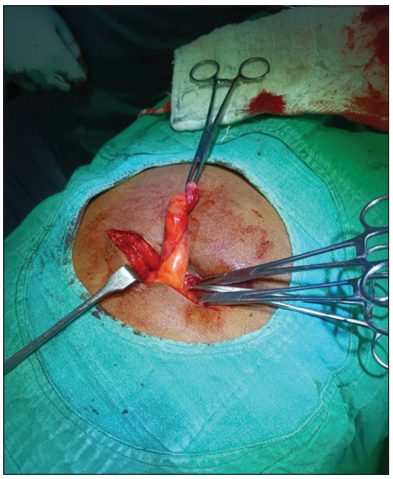

Figure 1: Inflamed appendix in umbilical hernial sac

CASE 2

A 49-year-old man presented with right sided scrotal pain with same sided inguino-scrotal swelling for 4 days duration. There was no history trauma, fever, anorexia, vomiting, constipation, urinary problem, and abdominal pain. The patient had no co-morbidity, no previous surgery and no addiction. On examination, patient had pulse rate of 82/min 124/76 mm of Hg, respiratory rate 16/min, body temperature 98.5°F, and BMI of 28 kg/m^2. Rt. inguino-scrotal swelling was not reducible and bottom swelling was very tender. Abdominal examination revealed soft, non-tender, and not-distended abdomen. Intestinal peristaltic sound was normal. Laboratory findings were also in normal range. USG of abdomen and inguino-scrotal region demonstrated right-sided inguino-scrotal hernia with inflamed appendix as content-type-11 Amyand hernia (Figure 2).

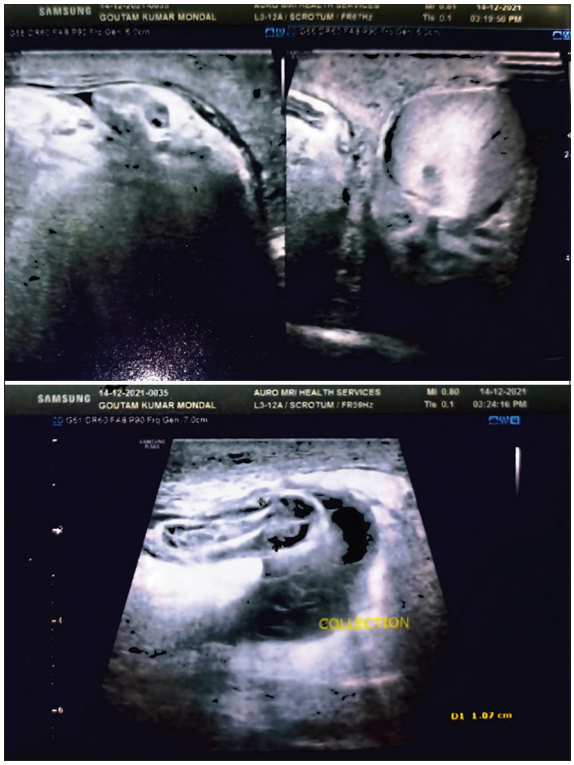

Figure 2: USG picture right-sided inguino-scrotal hernia with inflamed appendix

The patient was resuscitated for exploration through right inguinal approach. On exploration, inflamed appendix and omentum were found in hernial sac. Appendicectomy was performed and omentum reduced. Hernial sac closed at neck. Wound washed and hernial defect were repaired by darning with polypropylene suture. The operation was completed successfully. Histopathology confirmed acute appendicitis. Post-operative recovery was uneventful, and patient discharged on 3rd post-operative day. He was followed-up and reported no problem.

CASE 3

A 81-year-old gentleman attended with anorexia, weakness, abdominal fullness, and bilateral pedal edema for 7 days duration. Anorexia and weakness was gradually

increasing so much that patient could not walk without help of someone. He had no fever, vomiting, diarrhea, constipation, and abdominal pain. His urine output was adequate. He was known case of hypertension with chronic obstructive pulmonary disease. On examination, his pulse rate was of 84/min irregular, blood pressure - 130/70 mm of hg, temperature - 98°F, respiratory rate of 24/min, Glasgow coma scale of 15/15, and B.M.I of 27.3 kg/m^2. He had pallor and bilateral pedal edema more on right leg. Abdominal examination revealed everted umbilicus, mild distended abdomen and a big ill-defined non-tender lump in the right iliac fossa extending right flank to hypogastrium and normal peristaltic sound. Heart sounds were muffled, and diminished vesicular breath sounds. Hernial orifices were normal. Per rectal examination was also normal. Blood test revealed hemoglobin 8.6%, and raised alkaline phosphatase, prostate-specific antigen level. USG and subsequently CECT abdomen revealed acute appendicitis with localized intraperitoneal abscess formation and minimal ascites (Figure 3a and b).

After confirmation of diagnosis patient treated with intravenous antibiotics, metronidazole, and other supportive measures. He was followed up regularly. Appendicular lump size was reduced to normal. Patient reported no active problem.

DISCUSSION

Appendicitis presenting in an incarcerated umbilical hernia is a rare, probably due to mobile caecum, and elongated length of appendix.[5] Appendicitis in umbilical hernia may present with perforation and abscess. Imaging of abdomen confirms the diagnosis. Treatment for an incarcerated hernia is emergency hernia repair, with or without use of a mesh. For an umbilical hernia with appendicitis, appendectomy and anatomical repair is the appropriate treatment as well.[6] In our case, patient is having inflamed appendix in umbilical hernial sac, we did appendicectomy and herniorrhaphy without mesh. In recent literature showed laparoscopic surgery also helpful surgical option.[6] Amayand's hernia patients may present with non-specific symptoms, this remains a difficult diagnosis to make preoperatively and hence is mainly found intraoperatively during surgical exploration of a complicated inguinal hernia. A classification system designed to diagnose and treat Amyand's hernia was created and is called the Losanoff and Basson's criteria. It consists of four different types: type 1, a normal appendix in the hernia sac; type 2, a hernia with acute appendicitis; type 3, a hernia with acute appendicitis and abdominal sepsis; and type 4, acute appendicitis with related or unrelated abdominal pathology.[7] Depending on staging, open or laparoscopic appendicectomy with herniorrhaphy with or without mesh is preferred treatment. In our case,we did appendicectomy with inguinal herniorrhaphy. After 1 year follow-up patient is absolutely fine. Pre-operative diagnosis and planning remain difficult in elderly patient who presents with unusual clinical features. Imaging modalities confirm diagnosis. Considering age, co-morbidity, patient performance status, and severity of disease, decision is taken for appendicectomy or conservative management our case, we preferred conservative treatment. After 3-month follow-up patient is asymptomatic and appendicular lump is resolved.

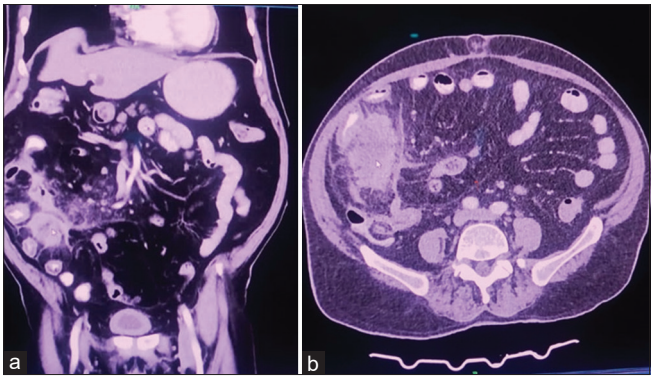

Figure 3: (a and b) CECT picture of abdomen showing inflamed appendix with lump formation at the right lumber region

CONCLUSION

Unusual presentation of acute appendicitis is difficult to diagnose and treat. With the help of imaging test and prior experience may help us to manage the case timely and reduce the morbidity and mortality. Our case series may help many health professionals to manage such unusual cases of acute appendicitis. Many more research work needs to confirm the validity.

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