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Case Report

Acute Appendicitis In Elderly - An Uncommon Presentation.

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Abstract

Introduction: Acute appendicitis in the elderly presents uniquely, often with atypical symptoms (less fever, pain) because of reduced pain perception and immune response which means less pronounced abdominal pain, fever, or classic signs like anorexia, leading to delayed recognition and a higher risk of severe complications like perforation and sepsis, due to delayed diagnosis and underlying comorbidities like diabetes mellitus and heart diseases. While less common than in younger adults, it's a significant concern, requiring vigilant diagnosis (considering malignancy) and often leading to worse outcomes if not caught quickly, though management options like surgery (laparoscopic or open) or sometimes antibiotics are considered, depending on frailty. Elderly patients face higher morbidity and mortality due to advanced age, delayed presentation, and comorbidities, often needing intensive care. The CECT scan abdomen is the diagnostic modality of choice.

Case report: A sixty-five-year-old female was on regular treatment for hypertension presented with acute pain abdomen fifteen days back which subsided after four days of symptomatic treatment by private practitioner. The pain was associated with low grade fever and vomiting for initial two days. The pain was in starting generalized and after one day localized to right iliac fossa. The first ultrasonogram abdomen done after one week of first episode of pain showed mild thickening in ileocecal area. In view of old age and for confirming the diagnosis, especially to rule out any malignancy, computed tomography scan of abdomen was done which showed thickened appendix (wall thickness of 10 mm) and measuring 24 mm in diameter with fat stranding of surrounding mesenteric fat. It was retrocecal in position and not opacified by oral contrast. No appendicolith or local collection was noted. Mild mural wall thickening of base of caecum was seen. The final impression was acute appendicitis. The surgical consultation was taken who have planned for interval laparoscopic cholecystectomy after six weeks of initial attack.

Conclusion: Acute appendicitis is not common in elderly but should be ruled out in patients with acute pain abdomen. It carries less favorable prognosis in comparison to young because of associated co-morbidities.

Keywords: Elderly, Acute Appendicitis, CECT scan, Pain abdomen, Umbilical area

INTRODUCTION

Acute appendicitis is one of the most common surgical pathological conditions, with a lifetime risk of 7–8% **[1]**. The incidence of acute appendicitis has been stable over the last 20 years after a decrease in the 20th century, but recently there has been an increase in incidence **[2]**. The incidence of acute appendicitis in the elderly is rising due to a longer life expectancy **[3]**. Although there is a reduction in the incidence of acute appendicitis after adolescence, acute appendicitis in the elderly is not uncommon—15% of patients above the age of 50 that present in the emergency department with acute abdominal pain have acute appendicitis, and it is the second most common acute surgical pathological condition **[4]**, with an increasing frequency **[5]**. The most common symptoms associated with acute appendicitis are also observed in elderly patients—lower abdominal pain (93.9–97.6%), anorexia (57.6–67.0%), nausea and vomiting (45.5–68.3%), shifting pain (30.3–45.1%), right iliac fossa pain (60.6%), and pyrexia (21.2–26.8%) **[6,7]**. Elderly patients may not have conclusive clinical signs of acute appendicitis, but signs of peritonitis—abdominal distention, reduced abdominal wall movement, severe tenderness, localized and generalized guarding—are more pronounced **[4]**. With increasing age, the ability to sense pain is decreased. Data from a study on abdominal pain perception in the elderly suggest a loss of spinal afferent innervation in humans **[8]**. Due to the lower basal temperature, diminished thermoregulatory response, and abnormalities in the production of and response to endogenous pyrogens, approximately 20–30% of the elderly population with acute infection will have a lower or absent fever response **[9]**. Elevated white blood cell (WBC) count, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio, and delta neutrophil index (DNI) are possible markers of

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perforated appendicitis in the elderly, with DNI being the only one that can significantly predict perforation, with a cut-off value of 1.4% (sensitivity 67.7%, specificity 90.0%) **[10]**. Abdominal ultrasound (US) is the first-line imaging choice in different populations (children, pregnant women). However, the overall sensitivity of 86% and specificity of 81% of US limit its usefulness in older populations **[11]**. Acute appendicitis is not the most common pathological condition in elderly patients with acute abdominal pain, as it presents in 3% **[12]** to 5% [13] of all patients requiring computed tomography (CT). However, liberal use of CT is suggested in elderly patients with acute abdominal pain due to broad spectrum of conditions, as it can influence the treatment plan in up to 65% of patients with positive CT findings, medical management in 52%, and surgical management in 48% **[12]**. Unenhanced CT has been suggested for triaging elderly patients with acute abdominal pain **[13]**. There are no data on sensitivity and specificity exclusively in the elderly, but in a meta-analysis in adult populations, the results of second-line US (sensitivity 83.9%, specificity 90.9%), CT (sensitivity 89.9%, specificity 93.6%), and MRI (sensitivity 89.9%, specificity 93.6%) are comparable and accurate **[14]**.

CASE REPORT

A sixty-five-year-old female was on regular treatment for hypertension presented with acute pain abdomen fifteen days back which subsided after four days of symptomatic treatment by private practitioner. The pain was associated with low grade fever and vomiting for initial two days. The pain was in starting generalized and after one day localized to right iliac fossa. All her biochemical parameters like liver & renal function tests, serum electrolytes, blood sugar, thyroid& lipid profile, urine complete, chest x-ray and ECG were normal. The only finding was mild leukocytosis and she was afebrile and hemodynamically stable. The chest, cardiovascular, neurological and per abdomen examination was essentially normal. The first ultrasonogram abdomen done after one week of first episode of pain showed mild thickening in ileocecal area. In view of old age and for confirming the diagnosis, especially to rule out any malignancy, computed tomography scan of abdomen was done which showed thickened appendix (wall thickness of 10 mm) and measuring 24 mm in diameter with fat stranding of surrounding mesenteric fat. It was retrocecal in position and not opacified by oral contrast. No appendicolith or local collection was noted. Mild mural wall thickening of base of caecum was seen. The final impression was acute appendicitis. The surgical consultation was taken who have planned for interval laparoscopic cholecystectomy after six weeks of initial attack.

Figure 1. Showing Thickened Appendix (Marked By Yellow Arrow).

DISCUSSION

Acute appendicitis is mainly caused by a luminal obstruction that can lead to inflammation, ischemia, and, consequently, perforation and peritonitis or contained abscess. The cause of obstruction differs according to age. At a young age, lymphoid follicular hyperplasia is the most common cause of obstruction of the vermiform appendix, whereas in older adults, fecolith, fibrosis, and neoplasia are the most common causes. When obstruction occurs, the intraluminal and intramural pressure of the appendix increases, leading to the occlusion of small vessels and resulting in ischemia **[15]**. Multiple risk factors for appendicitis have been reported in the literature, including unhealthy diet, smoking, a family history of appendicitis, low socioeconomic status, and the use of probiotics and antibiotics **[16]**. The typical symptoms of acute appendicitis include colicky pain that starts in the periumbilical area and then becomes constant and sharp, ultimately shifting to the right lower quadrant with tenderness at McBurney's point. Anorexia, nausea, vomiting, and fever are associated symptoms **[17]**. The accuracy of the diagnostic evaluation relies on the experience of the attending physician. A high index of suspicion is crucial as elderly patients can present with atypical symptoms. A combination of clinical signs, laboratory findings, and imaging is important to establish a diagnosis. The laboratory tests for suspected acute appendicitis should include a complete blood count with differential and serum C-reactive protein, with their combination significantly increasing the sensitivity. Now days, laparoscopic appendicectomy is preferred than open appendicectomy but sometimes in elderly with high risk factors, conservative approach is taken. In our case, patient had no other risk factors except for hypertension which was also under well control. Hence, she was planned for interval laparoscopic appendicectomy. As expected due to her old age, the fever was less but she was lucky that no complications developed.

CONCLUSION

Acute appendicitis is not common in elderly but should be ruled out in patients with acute pain abdomen. It carries less favorable prognosis, more morbidity and mortality, in comparison to young because of associated co-morbidities. The timely diagnosis can lead to proper resolution of complications, if any.

Conflict Of Interest

The authors declare that there was no conflict of interest and no financial support was taken for the above case report.

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