

Acute appendicitis in children under 3 years: A case series

Abstract

Background and Objectives:

Acute appendicitis is the most common paediatric surgical emergency but is uncommon in children younger than three years, accounting for only 2–9% of cases. Diagnosis in this age group is challenging because symptoms are often nonspecific and mimic common childhood illnesses such as gastroenteritis. This frequently results in delayed diagnosis, perforation, and increased morbidity. The objective of this report is to highlight the diagnostic challenges and clinical outcomes of perforated appendicitis in toddlers.

Methods:

We present a retrospective review of two toddlers under the age of three years managed for perforated appendicitis at Dr George Mukhari Academic Hospital. Clinical presentation, laboratory findings, imaging, operative management, postoperative complications, and outcomes were analysed.

Results:

Case 1 involved a 26-month-old female presenting with a three-day history of abdominal pain, vomiting, fever, abdominal distension, and constipation. Laboratory findings showed elevated C-reactive protein and metabolic acidosis despite a normal white cell count. Imaging confirmed a ruptured appendix with pelvic abscess and appendicolith. She underwent laparoscopic appendectomy and developed postoperative ileus and intra-abdominal abscess, recovering after 12 days of intravenous antibiotics. Case 2 involved a 30-month-old male initially misdiagnosed with gastroenteritis after presenting with vomiting, diarrhoea, fever, and dehydration. Computed tomography demonstrated perforated appendicitis with appendicolith. He underwent laparoscopic appendectomy, required postoperative intensive care, and was discharged after eight days with good recovery. Both cases demonstrated delayed presentation and perforation at diagnosis.

Conclusion:

Acute appendicitis in toddlers remains a rare but important diagnosis. Nonspecific presentations contribute to frequent misdiagnosis and delayed intervention, increasing the risk of perforation. A high index of suspicion, early imaging, and timely surgical management are critical to improving outcomes and reducing complications in this vulnerable age group.