

Acute Leukemia Initial Presentation as Acute Appendicitis - Case Report

Ahamed Faiz Ali, Sunil Kumar, Hind Otaibi, Mansoor, Waleed, Ola Taher

Department of paediatric Surgery, Ibn Sina Hospital, Ministry of Health -Kuwait

ABSTRACT

Appendicitis represents a real, everyday working problem for the primary physician and those who care for children. Acute appendicitis can be initial manifestation of leukemia or relapse. However, such cases have only been reported in adults. Very few cases are reported in pediatric population. Here, we report a 5-year-old girl who presented with clinical features suggestive of acute appendicitis. The clinical findings were supported with radiological findings. On further investigations, found to have acute leukemia. Acute appendicitis was treated conservatively. The parents were reluctant to accept the clinical diagnosis. The parents were keen to get more and more second opinion in this regard before accepting final diagnosis.

Key words: Acute appendicitis, conservative, leukemia

INTRODUCTION

Acute appendicitis is one of the common condition that needs surgical intervention in children. Although acute appendicitis is of clinical diagnosis, role of basic blood investigation should not be ignored especially in children with unusual presentation. Loss of appetite, nausea and vomiting hallmark of acute appendicitis symptoms in adults, were not predictive of appendicitis in children.

In a very young child ,the presentation of symptoms associated with appendicitis tends to be different from adults.

CASE REPORT

A 5-year-old Egyptian girl was referred to our center, with a history of abdominal pain, vomiting, and fever for 2 days. Abdominal pain was confined to the right lower part of the abdomen. Vomiting was non-bilious and vomits whatever she takes. Fever was low grade in nature.

There was no history of sore throat or diarrhea. No other members had similar illness in the family.

On clinical examination, febrile measures 38 C. Her oral cavity was normal except for mild throat congestion. She had mild dehydration. Her abdominal examination showed tenderness in the right iliac fossa associated with rigidity and guarding. There was significant rebound tenderness.

Her laboratory findings showed white blood cells $20.3 \times 10^9/L$ of which N 31.7%, L 30.8%, MO 37.1%, E 0.3%, B 0.2%, Hb 9.3 G/L, and platelet of $39 \times 10^9/L$, respectively. Her blood film showed hypochromia and anisocytosis with poikilocytosis. There were 28% of atypical blast cells.

Hematological picture of anemia, thrombocytopenia, and leukocytosis with high lymphocytes alerted the further investigations.

Ultrasonogram suggestive of early appendicitis computed tomography scan showed early appendicitis with fluid collection and regional lymphadenitis.

Case was referred to Hematologist, after reviewing the blood smear and bone marrow which suggestive of Acute myeloid leukemia.

Address for correspondence:

Dr.S.M.Ahamed faiz ali ,Senior Registrar ,Department of paediatric surgery Ibn Sina Hospital ,MOH -Kuwait.
E-mail: faizahamedali22@yahoo.co.in

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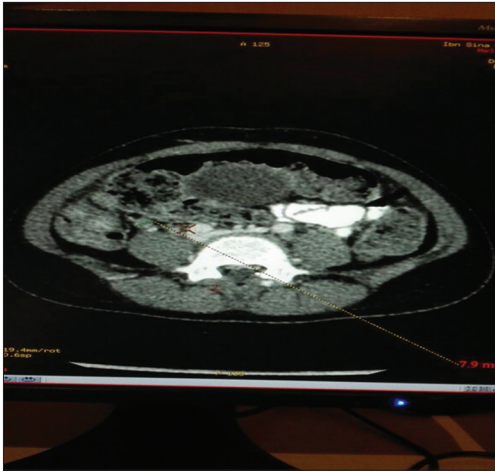


Figure 1: Computed tomography scan - suggestive of acute appendicitis measuring 7.9 mm diameter

The patient managed conservatively with parental antibiotics for 7 days, with tazocin and metronidazole. The patient responded well with conservative management for acute appendicitis. Chemotherapy was started later.

Parents were counseled, regarding the diagnosis over the period of time.

DISCUSSION

Acute appendicitis is the most common cause of emergency surgery in children, with a lifetime prevalence of 7–8%.^[1] Recognition of appendicitis in the children with hematologic malignancy may be difficult particularly in the setting of neutropenia and multiple medications causing an altered inflammatory response.

Acute appendicitis can be initial manifestation of leukemia or relapse. However, such cases have only been recorded in adults and very few case report in pediatric population.^[2] Leukemic patient due to defective immune system are highly susceptible to plethora of infection. In such patients, the most common cause of right lower quadrant abdominal pain includes appendicitis and typhlitis. The physician ability to differentiate between these etiologies is critical.^[3]

Early acute appendicitis in appropriately selected children can be successfully treated non-operatively.^[4] Recent data suggest that interval appendectomy may not be necessary after initial non-operative management of complicated appendicitis. Neto *et al.* recommended an initial non-operative approach in which surgery is only considered after a rise in neutrophil or with an aggravation of clinical symptoms.^[5]

Wiegering *et al.* noted that even perforated appendicitis may improve with conservative care alone.^[6]

Non-operative management of acute appendicitis is well described in adults. This treatment is based on the presence that non-perforated and perforated appendicitis are physiological different entities, rather than progression of disease.^[7]

Parents of children with cancer are susceptible to psychological distress, particularly for parents with high trait anxiety. The diagnosis of cancer and the treatment decisions associated with it may cause uncertainty, stress, and anxiety among parents [Figure 1].^[8]

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