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Paediatrics

MALIGNANCY MASQUERADING AS JOINT INFECTION- A CASE REPORT

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ABSTRACT ACUTE LYMPHOBLASTIC LEUKEMIA (ALL) is the most common malignancy in children. It accounts for 25% of all childhood cancers and approximately 75% of all cases of childhood leukemia.

ALL presents usually with fever, lassitude, pallor, bone pains+/- bleeds.

Here, we present a case of a child presenting with prolonged fever and swelling and pain in joints. Child was initially diagnosed as one hematological disorder and presented with joint effusion within a week.

KEYWORDS : Childhood cancer, ALL, Fever

Background:

- Childhood acute lymphoblastic leukemia was the first disseminated cancer shown to be curable. ALL has a striking peak incidence at 2 to 3 years of age and occurs more in boys than girls in all ages.

Case report:

- A 3 year old female child born to non-consanguineous parents, developmentally normal child brought with C/o low grade fever for 8 days, difficulty in walking since 3 days, difficulty in weight bearing and left lower limb swelling. Associated with C/o decreased appetite

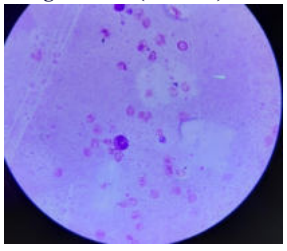
O/E:

- Liver palpable 8 cm below right costal margin, liver span 12cm. Spleen palpable 3 cm below left costal margin.
- Hb was less than 2 g % at admission, TC: 4200, DC: P 56 L 48 E 2, Platelet count: 2.8 lakh/cu mm. 2 packed cells transfusions were done, Hb rised to 7 g% and child was discharged with provisional diagnosis of transient erythropenia of childhood.
- Child returned within 5 days with complaints of fever of 3 days duration with swelling of right elbow since days and inability to move right upper limb and inability to walk without support. At second admission, liver and spleen not palpable.

Investigations:

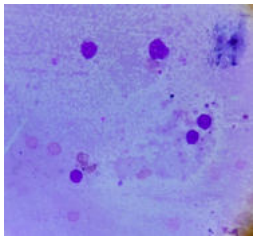
- Hb again found to be 3 g% with TC:1550, DC N2 L95 E2 M1. Peripheral smear showed microcytic hypochromic anemia of severe degree, Total WBC count decreased with occasional lymphocytes showing irregular shape nuclei. X ray right elbow (Image 1) showed features suggestive of effusion.

Image 1: X-ray Of Right Elbow (effusion)



2(A)

image 2: bone marrow aspiration findings (a & b)



2(B)

Treatment:

- Started on i.v antibiotics initially following clinical suspicion of septic arthritis. Fever spikes reduced in intensity. Packed RBC transfusions done with persisting fall in Hb level. Bone marrow aspiration done and it was inconclusive. Child referred in view of bicytopenia and suspicion of hematological malignancy
- Repeat bone marrow aspiration showed findings suggestive of B type ALL. The child is presently undergoing treatment for the same.

DISCUSSION:

- The diagnosis of ALL is strongly suggested by peripheral blood findings that indicate bone marrow failure. Anemia and thrombocytopenia are seen in most patients. Leukemic cells might not be reported in the peripheral blood in routine laboratory examinations. A high index of suspicion is required to differentiate ALL from Infectious mononucleosis in patients with acute onset of fever and lymphadenopathy and from juvenile idiopathic arthritis in patients with fever, bone pain and joint swelling. Patients with ALL is diagnosed by a bone marrow evaluation that demonstrates >25% of the bone marrow cells as a homogenous population of lymphoblasts.

CONCLUSION:

- The single most important prognostic factor in ALL is the treatment, without which the disease is fatal.
- Risk-directed therapy is the standard of current ALL treatment and accounts for age at diagnosis, initial WBC count, immunophenotypic and cytogenetic characteristics of blast populations, rapidity of early treatment response and assessment of MRD (Minimal Residual Disease) at the end of induction therapy. Five-year overall survival(OS) rate of children has improved to 89%.

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