

## Intussusception in an older child: Should it ring alarm bells?

**Dear Editor:**

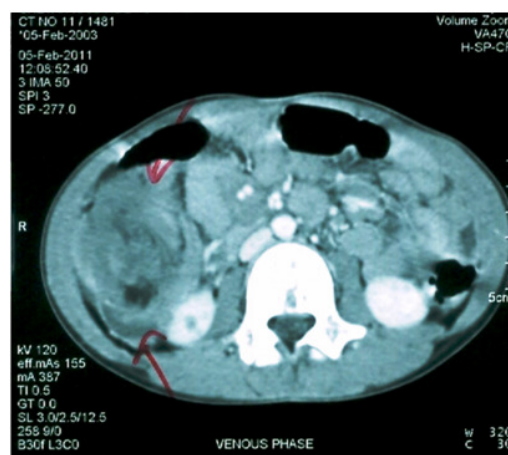
Intussusception is amongst the commonest abdominal emergencies in children [1]. Etiology is uncertain and majority are idiopathic. Pathological lead points can be found in 2-10 % [1]. Burkitt's lymphoma is an uncommon etiology of intussusception. We describe an uncommon instance of Stage IV Burkitt's lymphoma presenting primarily as intussusception in a child.

A nine year old male child presented with dull abdominal pain since two months; aggravated since three days, with vomiting and fever. He had no prior history of constipation, diarrhea or weight loss but had worm infestation a month ago. After conservative treatment outside, he was transferred to our centre with an ultrasonography report suggesting intussusception. On admission, the child was afebrile, with tachycardia, tachypnea and hypotension. He was pale with bilateral cervical lymphadenopathy. There was a tender right hypochondriac mass (9 x 5 cm) palpable per abdomen; the right iliac fossa being empty. Liver and spleen were just palpable and firm. Per rectal examination and other systems were normal.

On laboratory evaluation, hemoglobin was 7.3g%, leukocyte counts were 8,500/mm<sup>3</sup> (no abnormal cells), platelet count was 34,000/mm<sup>3</sup> and ESR was 70 mm in one hour. Renal and hepatic functions were normal. Abdominal Ultrasonography (USG) showed intussusceptions with adjacent adenopathy, and splenomegaly. He was managed conservatively with nasogastric aspiration, intravenous fluids, antibiotics, and packed cell and platelet transfusions. USG guided hydrostatic reduction of the intussusceptions was attempted on three occasions, but incomplete. Due to ileocaecal thickening, caecal part of intussusception was stuck at the ileocaecal junction. Also as extensive abdominal

lymphadenopathy was noted, ileocaecal koch's with lymphadenitis was suspected.

**Figure-1:** Abdominal Computed Tomography of patient showing a large Ileocolocolic intussusception in Right Lumbar region



Over the next week, hepatosplenomegaly progressively increased, anemia and thrombocytopenia worsened. Peripheral smears now also showed 42% lymphocytic blasts. Abdominal Computed Tomography (Figure 1) showed a large Ileocolocolic intussusception, smaller ileoileal intussusceptions, lymphadenopathy, hepatic and renal deposits, suggesting lymphoma. Bone marrow aspiration showed a hypercellular marrow with 80 % blast cells and immunophenotyping was suggestive of B cell Non Hodgkin's lymphoma (Burkitt's). HIV ELISA and FISH analysis for c-myc were negative. Cerebrospinal fluid examination was normal. He was Stage IV by St Jude staging of Non Hodgkin's lymphoma and started on first cycle of chemotherapy. Patient responded, the hepatosplenomegaly regressed and is doing well post chemotherapy.

An underlying pathological cause can be found in only 2-10 % of cases of intussusceptions [1]. Also, the proportion of intussusceptions with pathological lead points is observed to increase after one year of age; with more than 57% children over 4 years showing an identifiable lesion [1]. Commonest amongst them are Meckel's diverticulum, polyps, duplications, carcinoid tumor, Henoch-Schonlein Purpura, appendix and cystic fibrosis [1]. Though uncommon, abdominal tuberculosis can also present as intussusception [2]; of significance in endemic regions. Tuberculosis was therefore considered early in our case, but subsequent course revealed otherwise.

Burkitt's lymphoma, an aggressive and rapidly growing neoplasm commonly manifests in the abdomen in non-endemic type Burkitt's lymphoma regions [3]. It can present as an abdominal mass, or with abdominal pain, nausea and intestinal obstruction [1, 4]. Intussusception caused by Burkitt's lymphoma, leading to acute abdomen is uncommon and diagnosis may be missed [3]. It has been postulated that intussusceptions can lead to early diagnosis of Burkitt's lymphoma, hence reports of Stage IV lesions presenting as intussusception are

uncommon [4]. A review of records of children with Burkitt's lymphoma over four decades by Gupta et al showed only three patients with Stage IV presenting with intussusception [4]. Also, most cases reported have been diagnosed on histopathology after laparotomy or biopsy [3, 5]. Our case is unique because the patient showed bone marrow infiltration and peripheral smear changes (Stage IV) within one week of admission, and was diagnosed by bone marrow and immunophenotyping only.

Thus, early diagnosis of cause for secondary intussusceptions in older children is emphasized as they may be amenable to timely intervention. Also, abdominal ultrasonography and computed tomography should be performed in older children with intussusceptions to rule out malignancy. Tuberculosis though common in endemic regions, may not always be the diagnosis and other pathologies should also be considered.

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