

Case Report

Case report of rare gastrointestinal non-Hodgkin's lymphoma presenting as intussusception in adults

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ABSTRACT

Gastrointestinal lymphomas comprise a group of distinct clinicopathological entities of B- or T- cell type, with primary gastrointestinal Hodgkin's lymphoma being extremely uncommon. The gastrointestinal tract is the predominant site of extra-nodal non-Hodgkin's lymphoma accounting for 30-40% of all extra-nodal lymphomas.¹ Most common non-Hodgkin's lymphoma causing intussusception is diffuse large B-cell lymphoma (DLBCL). We herein report a rare case of ileo-colic Intussusception due to diffuse large B-cell lymphoma in a 42-year-old female. Computed tomography showed ileo-colic intussusception. Open hemicolectomy with ileo-colic anastomosis was done with postoperative chemotherapy.

Keywords: Ileo-colic intussusception, B-cell non-Hodgkin's lymphoma, Diffuse large B-cell lymphoma, Ileo-colic anastomosis, RCHOP regimen

INTRODUCTION

Intussusception is a pathological condition where the proximal intestine segment slides into the distal bowel, though commonly seen in paediatric patients it is one of the rare causes of bowel obstruction in adults (<1%).³ Unlike paediatric population, aetiology is established in 70-90% of cases in adults and nearly 40% of them are caused by neoplasms.² Diagnosis of intussusception in adults is challenging since the acute abdominal pain is a non-specific symptom and one of the most common complaint in the setting of emergency medicine.⁴ Small bowel malignancies account for <2% of overall GI malignancies, among these 15-20% of them are lymphomas and these lymphomas accounts for <5% of GI malignancies.⁵ These small bowel lymphomas can present as lead point and cause intussusception as in the case of our patient to be discussed subsequently B-cell lymphoma arising from the ileo-caecal junction was the lead point. These B cell lymphomas arise from abnormal growth and proliferation of B lymphocytes, a type of

white blood cell involved in the immune response, B-cell lymphoma of the colon with intussusception is a relatively uncommon malignancy characterised by the presence of lymphoma cells within the colon, specifically involving the B lymphocytes.



Figure 1: Bowel within bowel appearance, central intussusceptum and outer intussusception separated by mesenteric fat.

These cases of intussusception when identified should be respected with a wide margin as done in our case as the lead point are often associated with malignancies which are observed on end histopathological reports as these are often emergency obstruction cases.

CASE REPORT

We report a case of 42-year Indian lady presented to surgery emergency of our tertiary care hospital with complaints of generalised colicky pain abdomen on and off in her right side of abdomen for last 3 months which was associated with episodic nausea, vomiting and loose stools however she had no previous bowel obstruction history, the patient gave history of significant weight loss and loss of appetite for 2 months. The patient presented with signs and symptoms of bowel obstruction with abdominal distension with multiple episodes of projectile bilious vomiting and non-passage of stools and flatus for last 2 days. The patient on examination was dehydrated, anxious, tachycardia and tachypnoea were present the patient had diffused abdominal tenderness with palpable tender lump of about 6×6 cm in right lower quadrant. The patient was resuscitated with warm IV fluids and nasogastric tube and foley's catheterisation was done, routine investigations were sent and planned for CECT abdomen, the blood reports were within normal range, the CECT abdomen showed bowel within bowel appearance seen at right side abdomen with terminal ileum and caecum along with mesentery is extending into the ascending colon with wall thickening of distal part of intussusception associated mild proximal dilation of distal ileal loops with multiple small mesenteric lymphadenopathy. Then patient was taken up for emergency laparotomy with informed consent in view of small bowel obstruction ileo-colic and colon-colic intussusception with hard mass as lead point in caecum was identified, the proximal ileum was dilated and oedematous with multiple enlarged lymph nodes seen in mesentery, while the distal bowel to intussusception was collapsed.



Figure 2: Intraoperative image showing the intussusception at ileo-colic junction.



Figure 3: Resected specimen showing growth at ileo-colic junction causing intussusception.

Suspecting malignancy on table decision to proceed with right hemicolectomy with mesenteric lymph node emission done with side-side stapled ileo-colic anastomosis. The specimen excised was sent for histopathological examination, which showed features of B-cell non-Hodgkin's lymphoma. The tumour cells are positive for CD20 and ki67 index was 90-95%. Case was discussed with medical oncologist and given 6 cycles of R-CHOP regimen with frequency of every 21 days followed by PET-CT to evaluate disease status, patient is doing well now.

DISCUSSION

Intussusception occurs when a segment of bowel and its mesentery invaginates into the lumen of adjacent bowel segment.⁶ Usually seen in paediatric cases and presents with obstruction, in adults it accounts for only 1-5% of all obstruction.⁷ non-Hodgkin's lymphoma is a type of cancer that originates in lymphatic system, especially in the B-type WBC cells. Intussusception by a non-Hodgkin's lymphoma is a rare manifestation when a lymphomatous mass grows in the gastrointestinal tract and acts as lead point to cause intussusception and presents with abdominal pain, nausea, vomiting, blood in stools, diarrhoea and constipation with pain as the most common symptom.⁸

The mechanism for Intussusception by an intraluminal mass is by pulling forward of mass by peristalsis and drags the attached bowel wall segment with it. In transmural, extramural masses because of adhesions and other factors leads to abnormal peristalsis, kinking which acts as lead point.² Primary GI lymphoma constitutes only 1-4% of all GI malignancies, 90% of them are B-cell tumours, most common primary GI lymphoma are non-Hodgkin's lymphoma. Stomach is the most commonly involved site followed by small intestine and rectum. Small intestinal lymphomas represent 15-20% of all small intestinal tumours and 20-30% of all primary GI lymphomas. Most common site involving in lymphoma of small intestine is ileum (60-65%) followed by jejunum

(20-25%).² ultrasonography is important tool for diagnosis of intussusception, features include target sign or doughnut sign in transverse view and pseudo-kidney sign, sandwich, hay fork sign in longitudinal view. CT is considered as gold standard with sensitivity of 58-100% and specificity of 57-71%. Treatment of choice in adults is surgical resection of involved bowel segment, reduction with barium/air is done in paediatric patients is not done in adults because it increases the risk of intraluminal seeding, haemorrhage and perforation.² Danish lymphoma study group found that surgery in combination with chemotherapy is superior to any other treatment in localised cases.⁹ It is always difficult to designate the ileocecal region as part of the small or large intestine because it includes the area from the distal ileum to the caecum, thus the designation for this region differs among studies.¹⁰ Involvement of regional lymph nodes by b-cell lymphoma of the ileo-caecal region are found to have bad prognosis.¹⁰ Intussusception secondary to malignant causes particularly lymphoma is difficult to diagnose preoperatively, resection should be performed in a manner consistent with the oncological principles.¹¹

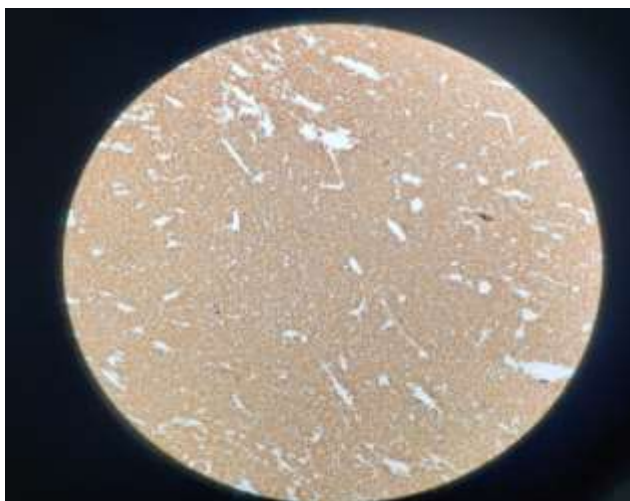


Figure 4: Microscopic image showing diffuse proliferation of large neoplastic B lymphoid cells.

CONCLUSION

Adult Intussusception is a rare cause of persistent or intermittent chronic abdominal pain, where history and clinical examination are imprecise, imaging modalities are needed to arrive at the diagnosis. In contrast to its paediatric counterpart the treatment is always surgical in adults. Adjuvant chemotherapy plays a pivotal role in the treatment of gastrointestinal non-Hodgkin's lymphoma. Adjuvant chemotherapy with monitoring will significantly reduce the number of disseminated diseases and mortality.

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