Case Report

Ileo-colic intussusception in a patient with non-Hodgkin's lymphoma

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ABSTRACT

The gastro-intestinal tract is a common site for non-Hodgkin's lymphoma and its involvement leads to a variety of clinical presentations. In adults, intussusception has rarely been associated with gastro-intestinal non-Hodgkin's lymphoma. When it occurs, computerized axial tomography scanning seems to be the diagnostic tool of choice.

Keywords: Intussuseption, non-Hodgkin's lymphoma, gastro-intestinal tract, computerized axial tomography.

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An intussusception is an invagination of a segment of gastrointerstinal tract into an adjacent one. It is a rare cause of intestinal obstruction in adults, compared to children.[1] Whereas intussusception is usually idiopathic in children, in adults an underlying pathology is demonstrable in over 90% of cases.[2] The intussusception is located in the large or small intestine in 90% of cases and in the stomach or surgically created stomas in the remaining 10%.[3,4] Intussusception has been rarely described in association with gastrointestinal lymphoma. We report a case of ileo-colic intussusception due to non-Hodgkin's lymphoma in a 66 year old man diagnosed by computerized axial tomography (CAT) scan.

Case Report. A 66 year old man presented to the hospital with a 2 month history of right sided lower abdominal pain, epigastric pain and constipation. Physical examination upon presentation did not demonstrate peripheral lymphadenopathy or hepatosplenomegaly. His abdominal examination was essentially unremarkable. His screening laboratory work-up gave normal hematological and biochemical values. Chest radiograph was normal. Upper gastrointestinal endoscopy revealed a lobulated friable mass at the fundus of the stomach. Endoscopic biopsy of this mass was read as low-grade non Hodgkin's lymphoma (NHL). Computerized tomography scan of the abdomen showed some enlarged mesenteric and para-aortic lymph nodes only. Barium meal and small bowel follow-through showed narrowing and irregularity of the terminal ileum. Bone marrow examination was negative for lymphoma. Based on the above findings the diagnosis of primary low-grade gastrointestinal lymphoma was made. The patient was initially treated with a monthly dose of cyclophosphamide as a single agent for his lymphoma. He experienced remarkable improvement in his symptoms following the initiation of cyclophosphamide. He, however, sustained recurrence of lower abdominal pain and epigastric fullness 5 months later. A repeated CAT scan of the abdomen showed progression of his disease with more para-aortic lymphadenopathy and more infiltration of the terminal ileum and the cecum. Repeated upper gastrointestinal endoscopy demonstrated significant shrinkage of the fundal mass but with new evidence of duodenal involvement. Due to patient's subjective as well as

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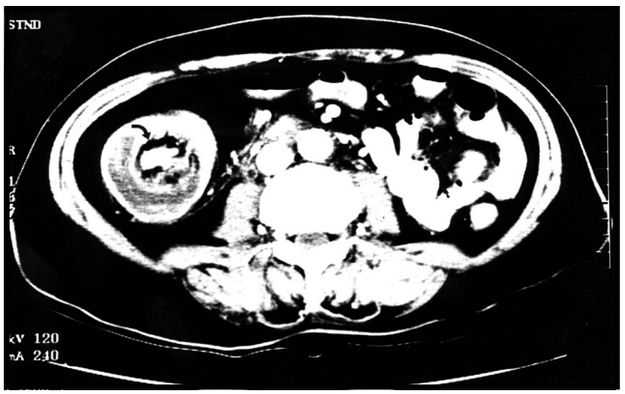

Figure 1 - Computerized tomography scan of the abdomen showing the characteristic radiological features of ileo-colic intussusception (Target mass).

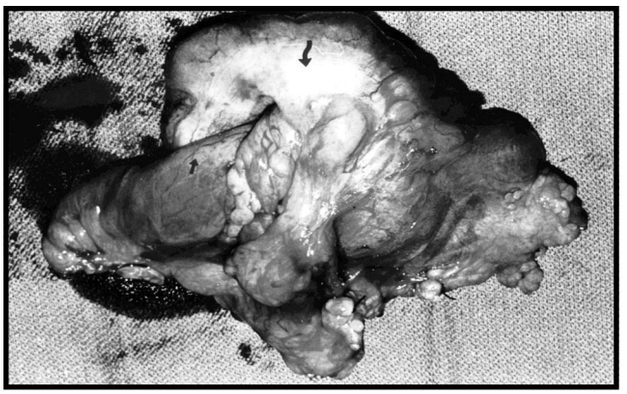

Figure 2 - The resected intussesceptive mass consisting of enlarged mesenteric nodes and parts of the ileum and colon.

objective progression, he was switched to the conventional "CHOP" chemotherapy regimen (Cyclophosphamide, Adriamycin, Vincristine, and Prednisone). Because of the patient's advanced age an initial 40% reduction in the dose of Cyclophosphamide and Adriamycin was carried out. He tolerated this regimen fairly well. His disease continued, however, to progress after 2 cycles of chemotherapy as manifested by worsening of his symptoms and the development of a tender palpable mass in the right iliac fossa. Repeated CAT scan at this stage revealed the characteristic radiological features of ileo-colic intussusception with the terminal ileum being "telescoped" into the colon up to the mid-transverse segment (Figure 1). Exploratory laparatomy was carried out on urgent grounds and reduction of the intussusception together with resection of the terminal 7 cm of the ileum and right hemicolectomy were carried out. Intra-operatively a large mass, consisting of nodular lymphodenopathy in the mesentery of the large bowel and the diseased terminal ileum, forming the intussusceptive leading point to the hepatic flexure of the colon was detected (Figure 2). The patient's post-operative course was essentially uneventful and characterized by gradual improvement in his symptoms. The histopathological examination of the surgical specimen confirmed the earlier diagnosis of low-grade NHL. The patient was discharged from the hospital to have his chemotherapy resumed in 2-3 weeks time. The patient, however, expired after his 2nd postoperative cycle of chemotherapy due to rapid progression of his disease which had been refractory to further therapy.

Discussion. Unlike Hodgkin's disease, which is almost exclusively a nodal disorder, NHL frequently involves extranodal sites. Although lymphoma arising in the gastrointestinal tract constitute 1-4% of tumors arising in this location, the gastrointestinal tract is the most common extranodal site for the development of NHL accounting for 30% of all cases.[5-6] Demonstrable gastrointestinal infiltration has been reported at the time of autopsy in 50-60% of patients dying from NHL.[7] The clinical presentation of patients with gastrointestinal lymphoma is variable and ranges from non-specific symptoms such as abdominal pain, anorexia, nausea and vomiting to a severe malabsorptive illness.[8] A palpable abdominal mass can be found in no more than 20% of patients with gastric lymphoma. Gastrointestinal bleeding, intestinal obstruction and perforation may complicate the disease at any time during its course.[5,7,8] Intussusception has been rarely reported as a complication of gastrointestinal lymphoma in adults. Anecdotal case reports have appeared in the medical literature describing this rare complication of the disease. The usual presenting symptoms of lymphoma-associated intussusception in adults have been right lower abdominal pain which could be associated with diarrhea or lower gastrointestinal bleeding.[9-12] The palpation of a soft tender mass in right iliac fossa, as was the case in our patient, is the commonest sign at presentation.[9,10,12] Anatomically ileo-colic and ceco-colic intussusception account for almost all described cases.[9,10] The diagnosis of intussusception can be made by several radiological methods. Computerized axial tomography scanning has been found to be reliable in diagnosing ileo-colic, ceco-colic and colo-colic intussusception.[13,14] The classic CAT scan finding consists of a 'target mass' that has larger than normal cross-sectional diameter of the contiguous bowl with proximal obstruction. The mass is classically described to contain low and high density structures producing a layered or stratified pattern.[15] The primary treatment of lymphoma-associated intussusception in adults is always surgical.[12] Right hemicolectomy with excision of the terminal ileum together with the

dissection of any involved lymph node in proximity of the lesion seems to be the appropriate surgical approach.[9,12] Chemotherapy for non-Hodgkin's lymphoma will have to be initiated post operatively in the usual way to treat any residual disease. Data on long term outcome for patients so treated is lacking. However, we are aware of a single case report of a young patient who remained disease free 24 months following surgery and chemotherapy for gastrointestinal NHL complicated by ileo-colic intussusception.[10]

In summary, intussusception is a rare complication of NHL involving the gastrointestinal tract which should be considered in patients who present with persistent abdominal pain especially if it is associated with a palpable tender right lower abdominal mass. CAT scan of the abdomen seems to be the diagnostic tool of choice in this regard.

References

1. Coran AG. Intussusception in Adults. Am J Surg 1969; 177: 735-738.
2. Agha FP. Intussusception in Adult. Am J Roengenol 1986; 146: 527-531.
3. Felix EI, Cohen MH, Bernstein AD, Schwartz JH. Adult Intussusception: Case Report of Recurrent Intussusception and a Review of the Literature. Am J Surg 1976; 131: 758-761.
4. Loehr WJ, Mujahed Z, Zahn FD, Gray GF, Thorbjarnarson B. Primary Lymphoma of the Gastointestinal Tract: A Review of 100 Cases. Ann Surg 1969; 170: 232-238.
5. Lewin KJ, Ranchod M, Dorfman RF. Lymphoma of the Gastrointestinal Tract: A Study of 117 Cases Presenting With Gastrointestinal Diseases. Cancer 1978; 42: 693-707.
6. Serour F, Dona G, Birkenfeld S, Balassiano M, Krispin P. Primary Neoplasm of the Small Bowel. J Surg Oncol 1992; 49: 29-34.
7. Ehrlich AN, Stalder G, Gellar W, Sherlock P. Gastointestinal Manifestation of Malignant Lymphomas. Gastroenterology 1968; 54: 1115-1121.
8. Haber DA, Mayer RJ. Primary Gastrointestinal Lymphoma Semin Oncol 1988; 15: 154-169.
9. Jalleh RP, Semevaro D, Vellacott KD. Cecocolic Intussusception in Multiple Lymphomatous Polyposis of the Gastrointestinal Tract. Report of a Case. Dis Colon Rectum 1990; 33: 424-426.
10. Takiguchi N, Sarashina H, Saitoh N, Nunomura M, Kouda K, Ozaki K, et al. Ileocolic Intussusception in adult due to Malignant Lymphoma in the Cecum with Intramural Metastasis. J Gastroentrol 1996; 31: 603-606.
11. Akcay MN, Polat M, Cardci M, Gencer B. Tumor Induced Ileo-Ileal Invagination in Adults. Am J Surg 1994; 60: 980-981.
12. Matsushita M, Hajiro K, Kajiyama T, Ohana M, Konishi Y, Kusumi F, et al. Malignant Lymphoma in the Ileocecal Region Causing Intussusception. J Gastroenterol 1994; 29: 203-207.
13. Mazzeo S, De Liperi A, Sbragia P, Battolla L, Pinto F, Lencioni R, et al. Diagnostic Imaging of Intestinal Invaginations in Adult. Report of 9 Cases. Radiol Med Torino 1995; 90: 49-55.
14. Iko BO, Teal JS, Siram S, Chinwuba C, Roux V, Scott V. Computed Tomography of Adult Colonic Intussusception: Clinical and Experimental Studies. AJR 1984; 143: 769-72.
15. Merine D, Fishman EK, Jones B, Siegelman S. Enteroenteric Intussusception: CT Findings in Nine Patients. AJR 1987; 148: 1129-1132.