

Bowel Intussusception in a Patient with Human Immunodeficiency Virus Infection

Nermin Halkic, MD; Abdoulah Kayoumi, MD; François Mosimann, MD, PhD

From the Department of Surgery, University of Lausanne Medical School, Lausanne, Switzerland.

Address reprint requests and correspondence to Dr. Halkic: Department of Surgery, University of Lausanne Medical School, CH-1011 Lausanne-CHUV, Switzerland.

Accepted for publication 8 July 1998. Received 29 March 1998.

N Halkic, A Kayoumi, F Mosimann, *Bowel Intussusception in a Patient with Human Immunodeficiency Virus Infection*. 1998; 18(6): 545-546

Adult intussusception represents 5% of all intussusceptions and 1% of all bowel obstructions. In adults, it is often associated with a systemic disease, such as acquired immune deficiency syndrome (AIDS), and is usually caused by a focal pathologic process at the point of the intussusceptum. In these patients, diagnosis is often delayed, mainly because of the nonspecific and prolonged nature of the symptoms and because of the extensive differential diagnosis of nonsurgical abdominal conditions.^{1,2} Leucocyte count is rarely increased because of the depressed immune response. We present here the case of a patient with AIDS, who developed an ileocolic intussusception after laparoscopic appendectomy. The clinical and radiographic findings are described.

Case Report

An HIV-positive 37-year-old woman, with a CD4 count of 150 cells per cubic millimeter, was admitted for abdominal pain associated with nausea and vomiting. Pain without rebound tenderness was maximal in the right lower quadrant. Her temperature was 37.8°C and leukocyte count was 12.5 g/L. The abdominal ultrasound was inconclusive. The patient underwent an exploratory laparoscopy that showed an inflamed appendix. Histology confirmed the diagnosis of acute appendicitis. She was discharged the following day but was readmitted 48 hours later, with a recurrent, incapacitating abdominal pain. On plain abdominal film, there were signs of a small bowel ileus. Intussusception was suggested on the CT scan by a typical target image, with low-attenuation mesenteric fat surrounded by high-attenuation bowel wall (Figure 1).³ Ileocolic intussusception was confirmed at laparotomy. However, no pathologic lead point could be found. Reduction was possible without the need for resection. The patient recovered uneventfully.

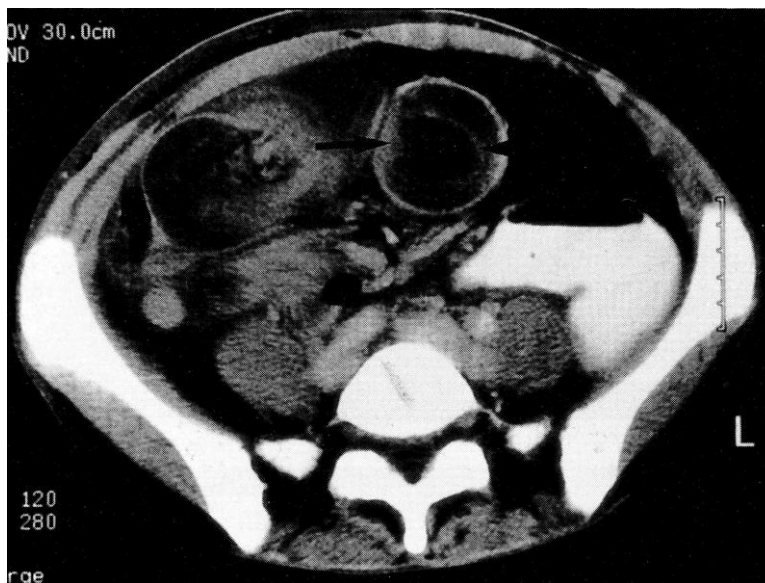


Figure 1. CT scan shows a typical target-shaped intussusception with low attenuation mesenteric fat (arrow) surrounded by high attenuation bowel wall.

Discussion

Intussusception is defined as the invagination of one segment of the bowel into another. Intraluminal tumors, submucosal edema, or any process that can cause dysrhythmic contractions of the bowel muscle may initiate an intussusception. In adults, colon intussusception is most commonly due to malignancy, while small bowel intussusception is more likely due to a benign tumor. A number of gastrointestinal manifestations of AIDS, including lymphoma, cytomegalovirus colitis or Kaposi's sarcoma can also potentially initiate an intussusception.

The radiologic signs of intussusception on CT scan are very specific. The distended loop of bowel (called the intussusciptiens) has an apparent thickened wall that actually consists of two layers of bowel resulting from the invagination of the intussusceptum. The intussusceptum usually occupies an eccentric position, being displaced by the attached mesentery to the antimesenteric side. The image may sometime suggest other causes of bowel wall thickening, such as ischemia, neoplasm or inflammatory bowel disease,⁴ but contrast enhancing of the mesenteric vessels supports the diagnosis.

Patients with AIDS are at risk for a number of small bowel processes that may act as lead points for intussusception. Among these are the numerous types of hypersecretory infectious enteritis to which AIDS patients are prone, and that can cause intrinsic small bowel inflammation and lymphoid hyperplasia.⁵ A motility dysfunction of neuroendocrine origin has been proposed as a mechanism of intussusception in those cases where no lead point could be found.⁶ In our patient, no pathological process could be demonstrated. It is unclear, however, whether the suggested motility dysfunction was associated with an AIDS-related neuroendocrine disorder, or to the close proximity of the resected appendix to the intussusception site.

AIDS-associated intussusception in the adult is an entity with an unknown frequency. The condition may be more common than clinically appreciated and requires a high degree of suspicion, given the scope of abdominal pathologies susceptible to producing intermittent abdominal colicky pains in AIDS patients. CT scan is helpful in diagnosing intussusception and should be obtained in AIDS patients with violent abdominal pain of unclear origin.

References

1. Danin JC, McCarty M, Coker R. Case report: lymphoma causing small bowel intussusception in a patient with the acquired immune deficiency syndrome. *Clin Radiol* 1992;46:350-1.
2. Begos DG, Modlin IM. The diagnosis and management of adult intussusception. *Am J Surg* 1997;173:88-94.
3. Wyatt SH, Fishman EK. The acute abdomen in individuals with AIDS. *Radiol Clin North Am* 1994;32:1023-43.
4. Wood BJ, Kumar PN, Cooper C, et al. AIDS-associated intussusception in young adults. *J Clin Gastroenterol* 1995;21:158-62.
5. Wolfson S, Shachor D, Freund U. Ileocolic intussusception in an adult: a postoperative complication of appendectomy. *Dis Colon Rectum* 1984;27:265-6.
6. Sharkey AK, Sutherland LR, Davison JS, Zwiers H, Gill JM, Church LD. Peptides in the gastrointestinal tract in human immunodeficiency virus infection. *Gastroenterology* 1992;103:18-28.