Adult intussusception in the Democratic Republic of Congo

Authors: Reinou S. Groen, Jeffrey J. Leow, Adam L. Kushner
Location: Surgeons OverSeas (SOS), New York, USA
Citation: Groen RS, Leow JJ, Kushner AL. Adult intussusception in the Democratic Republic of Congo. JSCR 2011 6:3

ABSTRACT

Adult intussusception is a relatively infrequent, but well documented entity in the Western surgical literature, where the majorities of cases is caused by tumors and require resection. In Africa and other tropical locations, however, other causes of adult intussusceptions predominate and must be considered. As Western trained surgeons increasingly volunteer in developing countries it is imperative to become familiar with the complex presentation and differential diagnosis of this disease. We present an illustrative case of adult intussusception with a complex differential diagnosis that we recently treated during a surgical mission to the Democratic Republic of Congo.

INTRODUCTION

Adult intussusception (AI) in the Western countries is usually caused by tumors and requires resection. (1) In Africa and other tropical locations, AI is frequently due to other causes. (2-10) The purpose of this case report of AI, encountered by the authors (RSG and ALK) during a surgical mission to the Democratic Republic of Congo (DRC) and review the literature, serves to emphasize these differences.

CASE REPORT

A 35-year-old woman gravida 11 para 10 was referred to the maternity department of a district hospital in eastern DRC, with intermittent dull lower abdominal pain. She reported no vomiting or nausea, no burning or discharge on urination and normal stools. Her last menstrual period was reported as 6 weeks prior to admission.

Her past medical history was significant for partial thickness burns to her chest when she was 4-years-old and recent treatment with albendazole for abdominal discomfort secondary to possible ascaris infection. All of her children were born by normal spontaneous vaginal delivery.

On physical examination she was well nourished, non-febrile, and hemodynamically stable. She had well healed burn scars on her chest. Her abdomen was soft, non-distended, with no palpable masses but with suprapubic tenderness without rebound or guarding. A vaginal examination elicited cervical motion tenderness and a yellow discharge.
The available laboratory tests revealed a hemoglobin level of 12.6 g/dl, blood group B+, and a positive urine pregnancy test. Urinanalysis was negative for nitrite and leucocytes. An abdominal ultrasound revealed minimal fluid in the Pouch of Douglas, no intra abdominal masses and no evidence of an intrauterine pregnancy.

Cervicitis, salpingitis and tubal or extra uterine pregnancy were considered and since she was stable and had only mild symptoms, it was initially elected to observe her while treating her with intravenous fluids and antibiotics. After one day her abdominal pain increased and a right para-umbilical mass was noted. A repeat ultrasound demonstrated a target sign, consistent with intussusception. She underwent an exploratory laparotomy with findings of an ileo-colic intussusception. After reduction of the intussusception the bowel appeared viable but a cecal mass was identified and a right hemicolecotomy was subsequently undertaken. Upon transection of the bowel, a number of ascaris worms were identified and removed.

On examination of the specimen a 2x2x1 cm smooth sub mucosal mass was noted in the cecum opposite the ileo-cecal valve. The mass was solid, well defined and without evidence of inflammation. Bisection of the mass showed collagen-like tissue, but no definite histology was possible to obtain. No other abnormalities were noted and we found no enlarged lymph nodes.

The patient had an uneventful postoperative recovery. Antibiotics for treatment of cervicitis were continued while on follow up the urine pregnancy test became negative and a course of albendazol was repeated.

**DISCUSSION**

AI in the developed world has a high association with malignancy and resection is recommended. (1) In Africa and other tropical locations a variants of AI of unknown etiology has been reported. (2-10) Cook states in his review on Colonic Intussusception:

“Although children may be afflicted, the vast majority of patients affected are adults. The aetiology of this condition, as with volvulus, is unclear; while intestinal polyps or amoebomas account for a minority, there is no obvious clue in most cases. Gangrene is about three times more common with the ileo-ileal and ileo-caecal varieties compared with the caeco-colic type” (2)

In a review, VanderKolk et al showed that ceco-colic intussusception was the most common cause of intestinal obstruction at a district hospital in Rwanda. Of the 43 patients with AI seen during a 5 year period, all presented with a “dimple” in the cecum, opposite the ileo-cecal valve. Ascaris infestation was found in 8% of the patients. The authors hypothesized, that the etiology of AI was irritation from secretions or diet. They recommended simple reduction by careful milking of the bowel in much the same manner as pediatric cases and resection only for gangrenous bowel. (3) Cole, in 1966, described similar ceco-colic variant of AI in 100 cases of intussusception. (4) However, a later review from the same area (2002) suggested that the pattern of obstruction had changed considerably from that previously described by Cole. These authors concluded that a change to a more Western lifestyle, particularly diet,
may have altered the prevalence of this condition. (5)

Other authors, from Haiti, Sri Lanka and Papua New Guinea, described a similar, so called tropical intussusception. (6,7,8) Greco and Lepreau reported 15 cases from Haiti, where there was a high incidence of gangrenous bowel, requiring resection in almost all patients. (6) Rasaretnam presented a series of 76 cases seen between 1964 and 1974 in Sri Lanka and also recommended resection. (7)

Melcher and Safadi suggested that that 40-50% of ileo-colic intussusception in adults was due to a malignancy. (1) Cotton, a general surgeon in Zimbabwe, in response to that conclusion asserted that enteric intussusception in adults in Africa was a relatively common condition and instead of being associated with a malignancy was usually associated with lymphadenopathy from various causes. He concluded that AI was recognized as a presenting complication of human immunodeficiency virus disease (HIV), and not infrequently found as a result of ileo-cecal tuberculosis. (9) Although a growing literature links intussusception to HIV, most of the reports focus on AI of the small intestine rather than on the ileo-colic or cecal-colic variety. (10) Given the worldwide prevalence of HIV, but particularly in Africa, and its relation to AI, one could argue for testing all such patients for HIV; we could not do so in our patient since the testing and therapy was not available.

It is most likely that our patient developed an adult intussusception secondary to a cecal lipoma as the lead point. The cervicitis and ascaris infestation were probably not related to the new onset of this AI. The value of presenting this case is to make other surgeons aware of the complex differential diagnosis of AI in Africa, which differs from that found in the Western countries.

REFERENCES

1. Melcher ML, Safadi B. Ileocolic Intussusception in an Adult. J Am Coll Surg. 2003 197:518
2. Cook GC. Gastroenterological emergencies in the tropics. Baillieres Clin Gastroenterol. 1991 5(4):861-86
3. VanderKolk WE, Snyder CA, Figg DM. Cecal-Colic Adult Intussusception as a Cause of Intestinal Obstruction in Central Africa. World J Surg. 1996 20:341–344
4. Cole G. Caecocolic Intussusception in Ibadan. Br J Surg. 1996 53:415
5. Irabor DO, Ladipo JK, Aghahow M et al. The Ibadan intussusception"; now a myth? A 10 year review of adult intestinal obstruction in Ibadan, Nigeria. West Afr J Med. 2002 21(4):305-6
6. Greco RS, Lepreau FJ. Adult Tropical Intussusception in Haiti. Arch Surg. 1973 106(5):689-91
7. Rasaretnam R, Kumarakulasinghe C, Eaton H. Tropical Intussusception in Adults. Aust. N.Z. J. Surg. 1976 46:57
8. Hadley G, Simpson R. Adult Intussusception in the Tropics. Br J Surg. 1983 70:281
9. Cotton M. Ileocolic Intussusception in an Adult. J Am Coll Surg. 2003 198(3):500
10. Farrier J, Dinerman C, Hoyt DB, Coimbra R, Intestinal lymphoma causing intussusception
in HIV(+) patient: a rare presentation. Curr Surg. 2004 61(4):386-9