CASE REPORT

A rare case of adult small bowel intussusception

Kiran Siddiqui, Abdul Quddus, Abul Fazal Ali Khan

Abstract

Introduction: Intussusception is an uncommon cause of intestinal obstruction in adults and inflammatory fibroid polyps are rare benign tumors of unknown histogenesis which may cause a very rare form of intestinal obstruction acting as a lead point in an intussusception.

Case Presentation: A 55 years old man presented with repeated attacks of colicky lower abdominal pain for past 1½ years not associated with features of intestinal obstruction. The episodes of pain got relieved spontaneously after variable periods of time. CT scan demonstrated an ileoileal intussusception in terminal ileum for which laparoscopically assisted segmental resection of the affected bowel having a polypolidal mass acting as lead point was performed. Histopathology revealed the mass to be an inflammatory fibroid polyp.

Conclusion: Inflammatory fibroid polyps are rare benign tumours of unknown origin which can present as unusual cases of adult intussusception.

Keywords: adult intussusception, small bowel obstruction, inflammatory fibroid polyp (IFP)

Introduction:

Intussusception is an uncommon cause of intestinal obstruction in adults[1]. Patients with intussusception present with either acute or chronic intermittent symptoms. The majority of adult intussusceptions occur due to malignant processes[2]. We report the case of an adult inflammatory fibroid polyp (IFP) arising from the terminal ileum and presenting with recurrent attacks of abdominal pain. The aim of this case report is to remind that adult intestinal obstruction due to intussusception may be caused by very rare etiology as well.

Case Report:

A 55 years old male presented in surgical OPD with complaints of repeated attacks of colicky lower abdominal pain for past 1½ years. The attacks were localized to right lower abdomen, would last for variable periods of time and resolve spontaneously. There were no complaints of intestinal obstruction. The patient was diabetic (controlled) and a smoker. No history of previous abdominal surgery found. On examination the patient looked healthy and had an average built. Abdominal examination was unremarkable as was the rest of systemic examination. The biochemical profile was also within normal range. Upper GI endoscopy revealed severe duodenitis. Barium meal follow through depicted dilation of terminal loops of ileum with patches of contrast material in large bowel suggesting partial obstruction. Abdominal ultrasonograph was unremarkable, Contrast enhanced CT scan abdomen and pelvis revealed an ileo-ileal intussusception in the terminal ileum with normal pattern of mesenteric vessels and fat around it. The patient underwent a laparoscopically assisted segmented resection of terminal ileum with end to end single layer, interrupted, extramucosal ileoileal anastomosis for an intussusception found approximately 4½ feet from ileocecal junction (figure 1).

The gross examination of the specimen showed a pear shape, broad based, pedunculated, polypoidal lesion approximately 3 x 2.5cm with a smooth mucosal surface (figure 2). Microscopically the

Jinnah Hospital Lahore
K Siddiqui
A Quddus
AFA Khan

Correspondence:
Kiran Siddiqui, senior registrar, Surgical Unit-II, Jinnah Hospital Lahore, Tel: +9242-99231400 Ext 2170, Fax: +9242-99231427
E-mail Address: kiransiddiqui85@hotmail.com

Figure 1: *Laparoscopic View of the Ileo-Ileal Intussusception*

Figure 2: *Gross anatomy of the resected bowel segment*

lesion had a loose fibromyxoid background with frequent and regular whorled fibroblastic reaction around vascular patterns, interspersed in a rich eosinophil mixed inflammatory infiltrate composed of lymhocytes, plasma cells, macrophages and mast cells. No definite glandular pattern seen. The findings were consistent with the diagnosis of an IFP.

The patient was discharged on the 4th post operative day after uneventful recovery with the last follow up done six months after the operation.

Discussion:

Inflammatory fibroid plops (IFP) are benign non-metastasing tumours of the digestive tract[3-7]. The most commonly affected site is the stomach and particularly the gastric antrum (70% of cases) where an incidence of 4.5% of all gastric polyps has been reported, followed by the small bowel (20% of cases). Rare cases have been described in the rectum, duodenum and oesophagus (the distal third being the commonest site)[5]. Gastric polyps tend to be significantly smaller than intestinal polyps[8]. IFP has peak prevalence in the 5th and 6th decades of life and has no sex predilection. Recurrence in a familial setting has been reported[7,9].

Grossly, IFP generally presents as a greyish or yellowish-grey sessile or pedunculated polypoid lesion of an average diameter of 2.5 to 5cm and commonly with ulceration of the covering mucosal surface[4,6,7,9]. The polyp usually arises from the submucosal region and projects into the lumen of the bowel. Although rare, intra-lesional haemorrhage is possible and assumed to be related to mechanical trauma in lesions localized in the small bowel with intussusception[6]. The muscle coats may be infiltrated and destroyed and more rarely penetration of the serous layer has been described but has been considered to be of no clinical significance, as demonstrated by the benign course[6].

Histologically IFP presents as a well circumscribed unencapsulated, submucosal mass composed of fibrous, oedematous and richly vascularised tissue[6,7,12]. The tumour is composed of two types of cellular elements[13]: proliferating spindle and stellate cells of supposed fibroblastic origin and polymorphous inflammatory cells comprising eosinophilic leukocytes or lymphocytes, the latter being occasionally accumulated in rudimentary lymph follicles. The extracellular substance appears abundant, myxoid and contains reticuline, collagenous and elastic fibers. In a substantial proportion of cases the proliferating spindle cells are arranged in concentric formations (onion skin-like pattern) around vessels and mucosal glands.

Clinical presentation is dependent on the size, location or complications of IFP[5]. Epigastric pain and bleeding are the most common symptoms in those of the stomach and the intestine, colicky abdominal pain and obstructive symptoms due to induced intussusception. In the oesophagus the rare case of FPI can present with bleeding, dysphagia or reflux symptoms[5,14].

Although it is generally considered not to be a real tumor but rather a reaction to some form of inflammatory stimulant (bacterial, physical,

traumatic, chemical or metabolic), the histogenesis of IFP remains controversial[4,6,11,12]. The fact that the lesion is nearly always solitary has suggested that it could be initiated by a very focused factor penetrating the mucosa to produce a local vasculo-stromal reactive proliferation like in cutaneous pyogenic granuloma.

Immunohistochemical studies have largely refuted the previously suggested neural or vascular nature as well as the muscular origin[6]. Other studies have supported a histiocytic, fibrohistiocytic or essentially fibroblastic nature of the lesion.

Radiological diagnosis of intususception is often made by ultrasound especially in the paediatric population[15,16]. In adults the diagnosis is in general easily made by means of CT or MRI[16]. These techniques have some limitations in determining exactly the primary disease causing intussusception but they provide excellent pre-operative evaluation, including the possible extension and/or dissemination of malignant tumor, and may also be useful in suggesting the presence of vascular compromise[16].

Conclusion:

Intussusception is a rare case of adult small bowel obstruction and IFP is one of the least common causes of this rare condition. Although IFPs are benign lesions, surgery is the only treatment when they present with bowel obstruction.

References:

1. Hung By, Warshauer DM: Adult intussusception: diagnosis and clinical relevance. Radiol Clin North Am 2003, 41:1137-1151.
2. Eisen LK, Cunningham JD, Aufses AH Jr: Intussusception in adults: institutional review. J Am Coll Surg 1999, 188:390-385.
3. Jabar M.F., Prasannan S., Gul Y.A.: Adult Intusscusception Secondary to Inflammatory Polyps. As J Surg, 2005, 28:58-61.
4. Coulier B., Coppens J.P., Mailleux P., Gooris J.P., Broze B.: A cause of intestinal intussusception in an adult. JBRBTR, 1994, 77: 121-123.
5. Godey S.K., Diggory R.T.: Inflammatory Fibroid Polyp of the Oesophagus. World J Surge Once, 2005, 3:30.
6. Santos G.D.C., Alves VAF, Wakamatsu A., Zucoloto S.: Inflammatory Fibroid Polyp. An Immunohistochemical Study. Arq Gastroenterol, 2004, 41: 104-107.
7. Haouet S., Bouraoui S., Ouertani L., et al.: Inflammatory Fibroid Polyp of the Digestive Tract. Based upon Five Cases. Ann gastroentérol Hépatol, 1994, 30:199-203.
8. Acero D., Garijo G., Hombrados M., et al.: Gastrointestinal Inflammatory Fibroid polyps. Clinical characteristics and follow-up in a series of 26 patients. Gastroenterol Hepatol, 2005, 28: 215-220.
9. Keusternamm S.A., Saleeb S.F., Teplick S.K.: General case of the day. Jejunal intussusception caused by a inflammatory fibroid poly (IFP). Radiographics, 1999, 19: 539-541.
10. Vanek J.: Gastric Submucosal Granuloma with Eosinophilic infilitration. Am J Paathol, 1949, 25:397-412.
11. Savargaonkar P., Morgenstern N., Bhuiya T.: Inflammatory Fibroid Polyp of the Ileum Causing Intussusception: Report of Two Cases With Emphasis on Cytologic Diagnosis. Diagn Cytopathol, 2003, 28: 217-221.
12. Bayle S., Rossi P., Bagneres D., et al.: Ileum Inflammatory Fibroid Polyp revealed by intussusception. About one familial case. Rev Med Interne, 2005, 26: 233-237.
13. Daum O., Hes O., Vanecek T., et al.: Vaneck's Tumor (Inflammatory Fibroid Polyp). Report of 18 Cases and Comparison With Three Cases of Original Vanek's Series. Ann Diagn Pathol, 2003, 7: 337-347
14. Kim S.G., Choi K.D., Kim J.S., et al.: Ileal inflammatory fibroid polyp: a rare cause of obscure GI bleeding diagnosed by wireless capsule endoscopy. Dig dis and Sciences, 2006, 51: 906-908.
15. Balci N.C., Radjazi S., Polat H.: Adult intussusception secondary to inflammatory fibroid polyp. Eur Radiol, 2000, 10: 1708-1710.
16. Park S.B., Ha H.K., Hay K., et al.: The diagnostic role of abdominal CT imaging findings in adult intussusception: focused on the vascular compromise. Eur j Radiol, 2007, 62: 406-15.