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CASE REPORT

Inflammatory fibroid polyp of small intestine: Report of two cases with review of literature

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ABSTRACT

Inflammatory fibroid polyps (IFPs) can occur throughout the gastrointestinal tract. Previous reports indicate that the stomach is the site of predilection, followed by the small intestine. IFPs usually are solitary lesions and affect all age groups, though adults are mainly affected. The presenting signs and symptoms vary according to the anatomical site. They appear grossly as localized submucosal sessile polypoidal masses. Microscopy reveals spindle-shaped cells, prominent capillaries and an inflammatory cell infiltrate. The lesions are benign, with unknown pathogenesis. We report here, two cases of inflammatory fibroid polyps leading to intussusceptions.

Key words: Inflammatory fibroid polyp, Intussusception.

Key Message:

- Inflammatory fibroid polyp of the small intestine is a rare, polypoid lesion.
- It may be a cause of intussusception.
- It should be considered as an important differential diagnosis in polypoid lesions of the stomach and the small intestine.
- Its diagnosis is confirmed by histopathological examination.

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Introduction

Inflammatory fibroid polyp or Vanek's tumour is a rare, solitary, sub-mucosal lesion, which was first described by Vanek in 1949. [1] The average age of presentation is the 6th to 7th decade of life, with a rare occurrence in children, while sex distribution has been reported to be equal in earlier studies.[2] Seventy percent of the cases occur in the stomach, followed by the small bowel. The clinical features vary according to the location of the lesion. They are usually diagnosed incidentally in asymptomatic patients.[3]

Inflammatory fibroid polyps (IFP) rarely cause ileal intussusceptions[4]. Two cases of inflammatory fibroid polyps of the small intestine causing intussusception, are documented here due to their rarity.

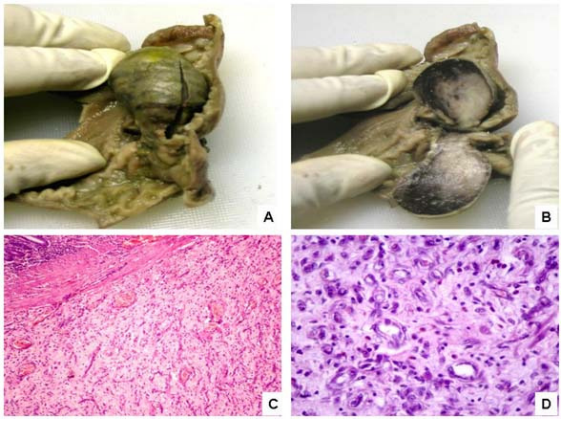
Case Summary

Case 1

A 65 year old male presented to the surgical emergency department with colicky periumblical pain and the distension of the abdomen. On examination, the abdomen was found to be distended

with a tympanic percussion note and a high pitched bowel sound.
Abdominal x ray in the supine position showed multiple gas fluid levels in the ileum.

Per operatively, a small polyp in the ileum, leading to the intussusceptions, was seen. The resection of an 8 cm long narrowed segment of the ileum with end to end anastomosis was done. The patient had an uneventful postoperative course and was discharged on the sixth postoperative day.



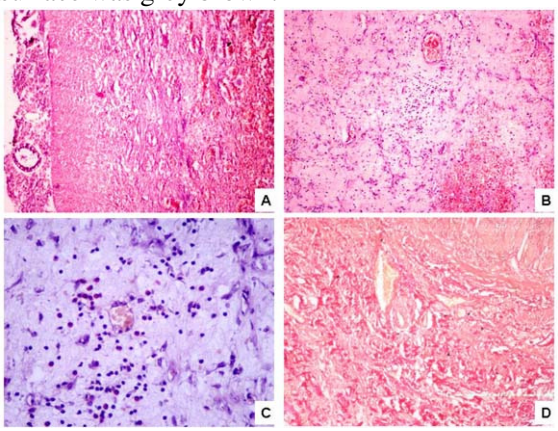
[Table/Fig 1A]: Polyp covered with normal intestinal mucosa.
[Table/Fig 1B]: Cut surface is variegated with areas of haemorrhage.
[Table/Fig 1C]: Section processed from the polypoid lesion showed Submucosal growth covered with normal mucosa (H&E x 40).
[Table/Fig 1D]: Higher magnification showed proliferating endothelial cells, capillaries, fibroblasts with numerous eosinophils (H&E x 100).

On gross examination, the resected bowel was found to be dilated in the middle. On opening it, a submucosal polypoidal mass of 3 x 2.5 x 1.0 cm, with a short stalk was seen. [Table/Fig 1A] The cut surface of the mass was tan grey and homogenous, with areas of haemorrhage. [Table/Fig 1B]

Microscopic examination showed normal intestinal mucosa with polyp, arising from the submucosa. The mucosa was partially degenerated at the apex of the polyp. There was intense fibroblastic and vascular proliferation along with polymorphic inflammatory response, which was dominated by eosinophils [Table/Fig 1C, D]. At some places, the fibrous wall was loose and also showed hyalinization.

Case 2
A 45 year old female presented with abdominal pain and vomitting. On examination, the abdomen was found to be mildly distended, with no palpable lump. Per operatively, a small polyp in the jejunum, leading to the intussusceptions, was seen. The resection of a 30 cm long segment of the jejunum, with end to end anastomosis was done. The patient had an uneventful postoperative course.

On gross examination, a polypoidal mass of 1.5 x 1.5 x 1.0 cm with short stalk was seen at a distance of 7cm from one of the resected ends. The mucosa was flattened over the polypoidal growth. The cut surface was grey brown.



[Table/Fig 2A]: Section processed from the apex of polyp showed degenerated mucosal lining seen. (H&E x 40).
[Table/Fig 2B]: Another section processed from polypoid growth showed area of haemorrhage and myxoid degeneration (H&E x 40).
[Table/Fig 2C]: Higher magnification showed Myxoid area with congested capillaries (H&E x 100).
[Table/Fig 2D]: Van Gieson stain highlighted the fibrous tissue (Van Gieson x40).

Microscopic examination showed degenerated intestinal mucosa at the apex of the polyp [Table/Fig 2A]. The polyp was found to arise from the submucosa. There was fibroblastic and vascular proliferation along with chronic inflammatory infiltrate. Areas of myxoid degeneration and haemorrhage were also seen [Table/Fig 2B, C]. Van

Gieson's stain in both the cases showed increase in collagen fibers. [Table/Fig 2D].

Discussion

Inflammatory fibroid polyps are rare, benign, tumour-like lesions of the gastrointestinal tract. These lesions were first described by Vanek in 1949, when he described 6 case reports of gastric submucosal granulomas with eosinophilic infiltration.[1] The maximum incidence of this condition is in the sixth decade of life, with an equal sexdistribution.[2] Most frequently, they are localized in the gastric antrum. Other GI sites which are affected (in decreasing order of frequency) are the small bowel (mainly the ileum), colon, gallbladder, oesophagus, duodenum, appendix and the rectum. Patients with IFP in the stomach present with vomiting and bleeding, while intussusception and obstruction are the symptoms of the lesions which are located in the small bowel.[5] Weight loss, diarrhoea, bleeding and anaemia are seen in the colonic lesions.[6]

Adult intussusceptions are relatively rare, constituting only 1% of the patients with bowel obstructions.[4] They are mostly caused by tumours. Eighty percent of the tumours which are associated with small bowel intussusceptions are benign.[7],[8] Lipoma is the most common benign tumour which causes intussusception. Inflammatory fibroid polyps (IFP) rarely cause ileal intussusception. Wysocki *et al* presented a case of biliary obstruction caused by a duodenal IFP.[5] Duodenal IFP accounts for 1% of the cases and presents with non-specific features. Dabral *et al* from our department reported a case of inflammatory fibroid polyp in a 7 year old boy who presented with intestinal obstruction.[9] Inthe literature, IFP has been reported to be more common in the stomach. However, all the cases reported from our department were from the small intestine (Dabral *et al* and present study).

The pathogenesis of inflammatory fibroid polyps (IFPs) is still unknown. The role of chemical, physical, or metabolic triggers have been suggested.[10]

These polyps are usually solitary, sessile, 2-5 cm in diameter and show mucosal ulceration. Wysocki *et al* found a firm 4 x 1.6 x 2.5 cm mass in the second part of the duodenum, with an overlying small area of mucosal ulceration.[5] In the present case report, the two polyps which were reported were 3 x 2.5 x 1.0 cm and 1.5 x 1.5 x1.0 cm in size, respectively. The overlying mucosa was normal in the ileal polyp, while the jejunal mass had flattened mucosa.

Microscopically, the lesions are centred in the submucosa and are characterized by vascular and fibroblastic proliferation (often in whorl like arrangements around the blood vessels) and a polymorphic inflammatory response, which is usually dominated by eosinophils as in the present case. Frequent areas of haemorrhage and myxoid degeneration are also seen The appearance of the intestinal fibroid polyp is similar to that of the homonymous gastric lesion, except that the neural like features which are commonly seen in the latter are less prominent.

Morphologically, IFPs can mimic several other tumourous and non-tumourous processes of the gastrointestinal tract, including inflammatory myofibroblastic tumours, eosinophilic gastroenteritis, gastrointestinal stromal tumours (GISTs) and other mesenchymal lesions. Sometimes differentiation is difficult, especially the differentiation between the inflammatory fibroid polyps and GIST.[11]

Immunohistochemically, the spindle cells are reactive for vimentin, CD34, bcl-2 and CD117 (c-kit).[12],[13] The latter differs from that of GISTs in that, it has a coarsely granular cytoplasmic quality with membranous accentuation. The lesion seems to lack malignant potential and recurrence of the polyp has been reported only once.[11]

To conclude, inflammatory fibroid polyps of the small intestine are rare, polypoid lesions which can present as intussusceptions, leading to intestinal obstruction. Clinically, they may be confused with neoplastic polyps, especially in adults and pre operative diagnosis is difficult, requiring histopathological examination for confirmation.

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