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Case Report

Inflammatory fibroid polyp presenting as ileocolic intussusception in adult

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ABSTRACT

Adult intussusception generally has a distinct pathological cause as a lead point. Inflammatory fibroid polyp (IFP) is a rare non-neoplastic submucosal lesion, furthermore, that polyp causing ileocolic intussusception in an adult is even rarer. Here we present a case of a 32-year-old female who presented with complaints of intermittent colicky pain associated with vomiting for 3 days. Computer tomography (CT) showed bowel obstruction caused by an ileocolic intussusception. Laparotomy with ileo-transverse anastomosis was done. Histopathological and immunohistochemistry (IHC) revealed that the cause of the intussusception was a rare inflammatory fibroid polyp. A benign condition being the cause of intussusception in an adult and the clinical symptoms were nonspecific posing clinical challenges makes this interesting case worthy of reporting.

Keywords: Intussusception, Inflammatory fibroid polyp, Ileocolic, Small intestine, Intestinal polyp

INTRODUCTION

An inflammatory fibroid polyp, also known as Vernek's tumor, is a rare benign tumor found throughout the gastrointestinal tract.[1] It is ordinarily found in the gastric antrum. Most predominantly seen among males. Peak incidence has been seen most commonly in the sixth and seventh decades of life.[2] The clinical presents of IFP are maximally based on the size and location of the polyp. Most commonly present as abdominal pain, intestinal obstruction, intussusception, and rarely as gastrointestinal (GI) bleed.[3] Adult intussusception is relatively rare, accounting for only 1-3% of all bowel obstructions.[2,4] In the small bowel, approximately 70% of intussusception is due to a benign etiology whereas in the large intestine most commonly due to malignant etiology accounting for approximately 66%.[5]

CASE REPORT

A 32-year-old female came to outpatient department (OPD) with complaints of intermittent colicky type of abdominal pain which was progressively associated with vomiting and poor oral intake for 3 days. No history of fever, diarrhoea, or constipation. Not a known hypertension or diabetes mellites.

Upon physical examination, vitals were stable. Abdominal examination revealed mild distension. Upon palpation, tenderness is present over the right lower quadrant. Rebound tenderness or guarding was absent. Computer tomography (CT) showed bowel obstruction caused by an ileocolic intussusception.

The patient underwent laparotomy with ileo-transverse anastomosis was done.

The grossly, terminal ileum measures 7.5 cm, and a partially cut open large intestine measures 22 cm. On opening, the large intestine showed an intussusception measuring 21 cm. Intussusceptum showed a pedunculated polyp measuring 4×3×2 cm (Figure 1).

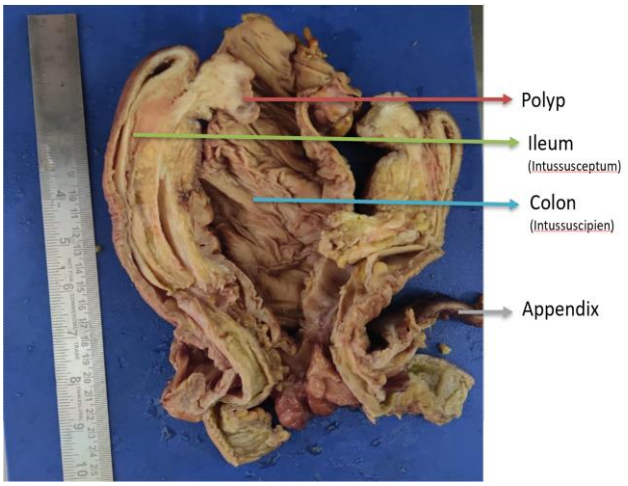

Figure 1: Cut open, large intestine showed an intussusception. The lead point for the traction of ileum to the colon is a polyp (red arrow).

The microscopically polypoidal lesion was covered with colonic and ileal mucosa with focal ulceration with neutrophilic exudates (Figure 2). Submucosa showed myxomatous stroma with benign spindle cells, prominent thick-walled vessels, and proliferating capillaries. Scattered inflammatory cells composed of plasma cells, lymphocytes, and eosinophils were present (Figure 3). No evidence of dysplasia or malignancy was seen.

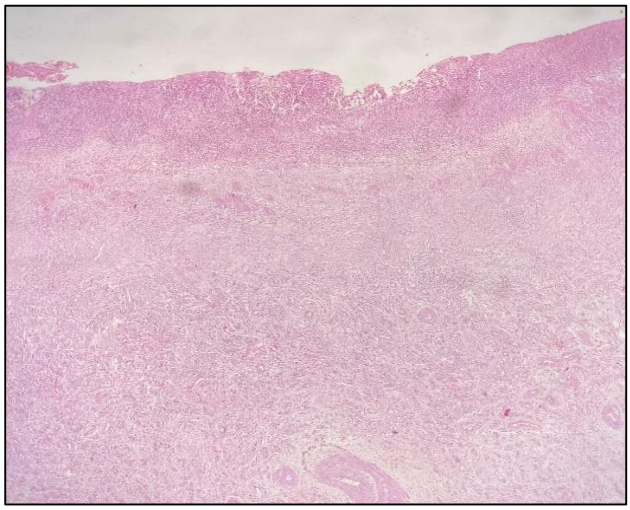

Figure 2: H&E 10X. The section shows focal ulceration covered with neutrophilic exudates and the underlying submucosa is expanded.

Immunohistochemistry (IHC) markers like CD34 were put in for conformation and also IHC for S100 and smooth muscle actin (SMA) were put in to rule out the differential diagnosis and confirm the diagnosis. Based on microscopic features, the positivity of CD34, and the negativity of SMA and S100, the pathological case for ileocolic intussusception was diagnosed as an inflammatory fibroid polyp (Figure 6-8).

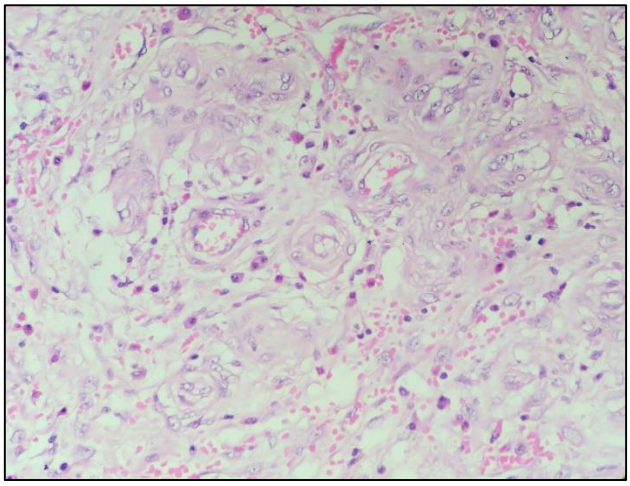

Figure 3: H&E 40X. The section shows Spindle-shaped cells with an 'onion skin' appearance around blood vessels and scattered inflammatory cells infiltrate composed of plasma cells, lymphocytes, and eosinophils.

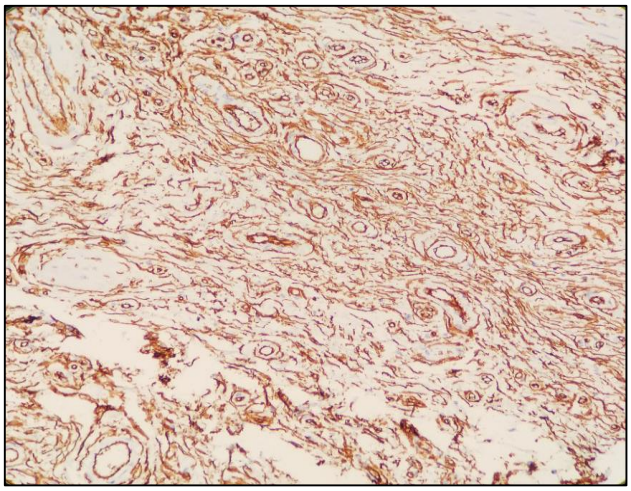

Figure 4: CD34 shows a strongly positive.

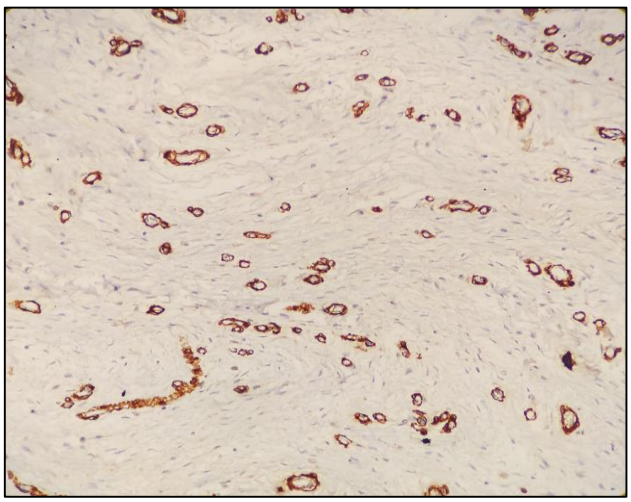

Figure 5: Smooth muscle actin (SMA) shows negative.

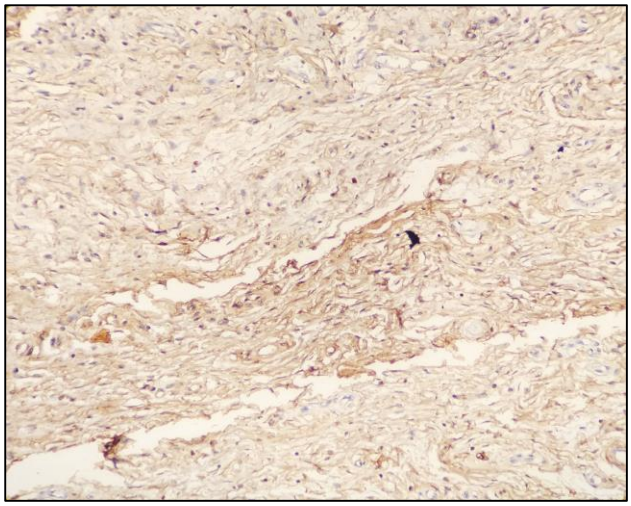

Figure 6: S 100 shows negative.

DISCUSSION

When a segment of the intestine telescopes into the adjacent segment, it is known as intussusception.[1] Once trapped, this invaginated segment pulls the mesentery along with-it during peristalsis. It is the most common cause of intestinal obstruction in children less than 2 years of age. It is uncommon in adults. It is most commonly caused by intraluminal mass or tumors that lead to traction in adults. The lead point pulls the affected segment of the intestine (intussusceptum) into the adjacent segment of the intestine (intussuscipien) during normal peristalsis.[3] This can lead to intestinal obstruction, compression of mesenteric vessels, and infarction if left untreated. It is idiopathic however few cases due to irritation in the lumen or lesion in the bowel wall can act as leading edges. It is of three types: enteroenteric, ileocolic, and colocolic.[4] Vanek first described IFP in the year 1949 as a "gastric submucosal granuloma with eosinophilic infiltration". It is an uncommon type of localized poly of the mesenchymal gastrointestinal tract.[5] More frequently seen in gastric antrum (66-75%) and seldom found in small intestine (18-20%), colon (4-7%), oesophagus (1%).[4,5] Precise etiology is unknown.[4,5] But trauma, allergic reaction, genetic tendency, bacterial, physical, chemical, and even metabolic stimuli have been proposed as initiators of the process.[6] Usually, IFPs are asymptomatic and are incidentally found during endoscopy or surgical procedures.[2,7] Mostly IFPs grow as an intraluminal polyps and are smaller than 4 cm, but case reports have discussed polyps up to 20 cm.[2,4,5,8]

Macroscopically, it can be sessile or pedunculated. Appearing to be none capsulated and with mucosal ulceration. Microscopically, the lesion originates in the submucosa. It is composed of spindle and oedematous or fibrous stroma, containing many thin-walled blood vessels of varying size. These blood vessels are surrounded by spindle cells.[9,10]

The inflammatory infiltrate is diffuse and rich in eosinophils. Can also include plasmacytic, lymphocytes, and macrophages.[5] Very minimal cellular atypia and mitotic activity are seen.[10]

CONCLUSION

Intussusception in an adult is rare, whereas IFP-causing intussusception is even more rare. Although malignancies are the most common cause of intussusception in adults, benign conditions like IFP should be also considered while looking for the cause of intussusception in an adult. Histopathology and immunohistochemistry evaluation is always needed for confirmation of diagnosis and to find the cause of intussusception.

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