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Inflammatory Fibroid Polyp of Ileum-A Rare Case with Review of Literature

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Abstract

Background: Inflammatory fibroid polyp is a rare benign tumor located in the stomach and small bowel. These tumors arise within the submucosa of the gastrointestinal tract.

Introduction: Inflammatory fibroid polyp (IFP) is a rare benign tumor which was initially describe by Vanek in 1949, termed as submucosa gastric granuloma with eosinophil.[1]Later on the term Inflammatory polyp was proposed by Helwig and Ranier in 1953.[2] The incidence of inflammatory polyp is very low i.e. 0.1%. The commonest site of involvement is gastric antrum and small bowel. We present the case of IFP in a 55 year old male patient to highlight the rarity of lesion and as well as characteristic microscopic features.

Clinical Presentation: Depending on the location of the tumor, these neoplasm show classic histologic features.

Case Report: We present a case of Inflammatory Fibroid Polyp arising from ileum in a 55year old male patient presented with intestinal obstruction.

Conclusion: Inflammatory Fibroid Polyp is a rare benign tumor of GIT. Clinical presentation of this tumor depends on the site. Histopathological examination helps in the definitive diagnosis of this tumor.

Keywords: Inflammatory Fibroid Polyp, Ileum, Benign Neoplasm

Case Report

A 55year old male patient presented with dull aching and diffuses pain in abdomen with abdominal distention since 3 days. There was a history of vomiting and constipation since 3 days. There was no history of fever. There was no history of diabetes mellitus, hypertension and tuberculosis. No significant past and family history.

On Examination: Auscultation of abdomen: Hyper peristaltic bowel sounds were noted.

USG Abdomen revealed gas in dilated bowel loop suggestive of intestinal obstruction. The patient was diagnosed as Acute Intestinal Obstruction.

Operation: Emergency laparotomy was done and excised specimen of ileum was sent for histopathological examination.

Gross Examination: Revealed a segment of ileum measuring 22cm in length. On cutting open, it revealed a well circumscribed polypoidal lesion protruding into the lumen of the ileum measuring 3 x 2.3 x 1.8 cm, cut section was grey white with areas of hemorrhage. (Figure 1)

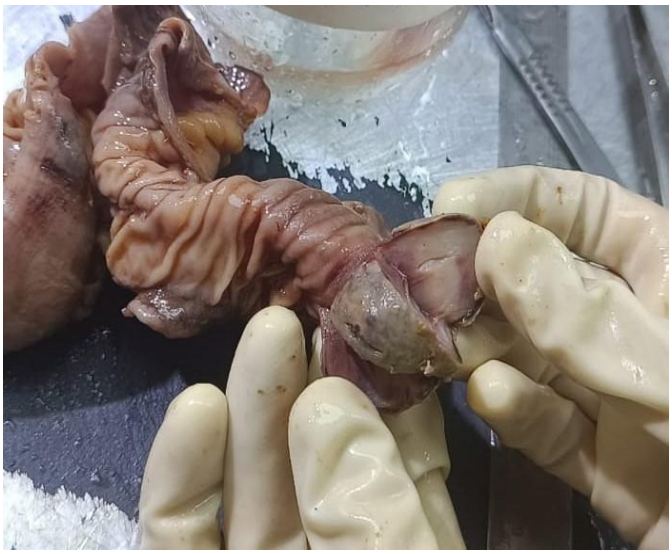

Figure 1: A segment of ileum showing a polypoid lesion protruding in the lumen. Cut section is grey white and shows areas of hemorrhage.

Microscopic Examination: Revealed a polypoidal lesion arising from the submucosa which was showing spindle cells admixed with fibromyxoidstroma, proliferation of blood vessels with inflammatory infiltrate dominated by eosinophils. Also noted was perivascular spindle cell onion skinning. Considering these features the diagnosis was given as inflammatory fibroid polyp. (Figure 2, 3, 4.)

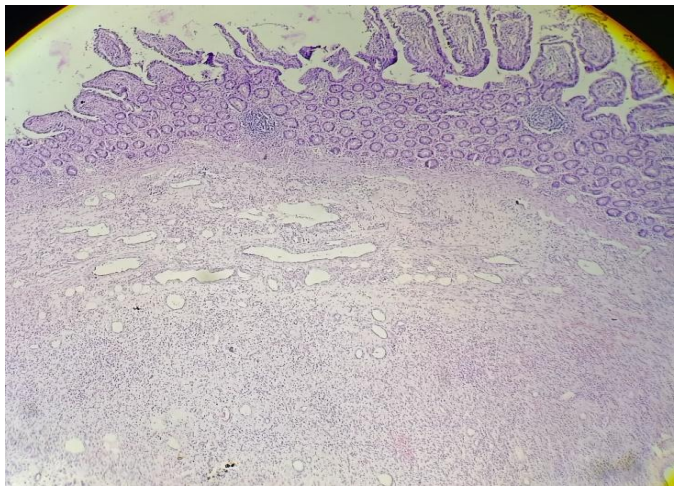

Figure 2: A polypoid lesion arising from submucosa (40x H&E)

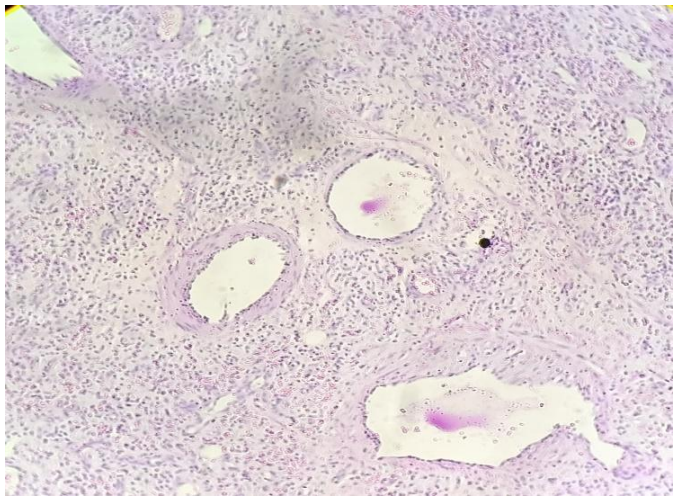

Figure 3: Submucosa shows spindle cells admixed with proliferation of vascular channels with perivascular onion skinning. (400x H&E)

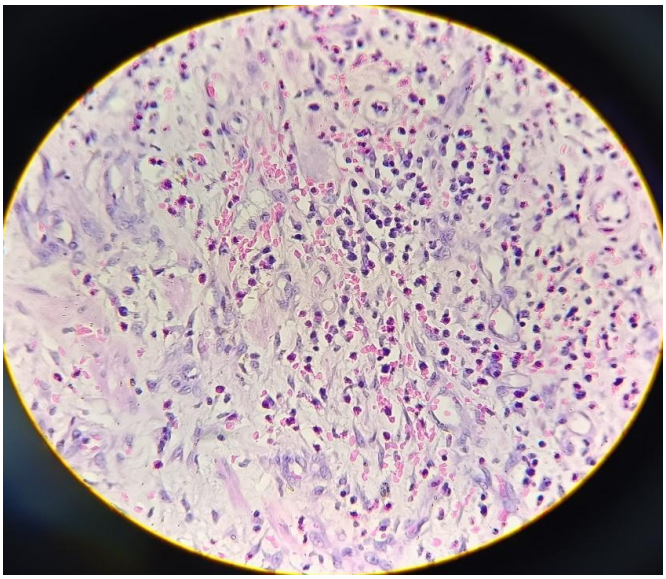

Figure 4: Inflammatory infiltrate predominantly eosinophils (400x H&E)

Discussion

Inflammatory fibroid polyp is a rare benign tumor of mesenchymal origin which arises in the submucosa of gastrointestinal tract. Commonest site is gastric antrum (60-70%), followed by small bowel (18-20%), colorectum (4-7%) and less commonly affecting esophagus, gall bladder and appendix.[3]These are usually solitary and grow intraluminally. The commonest age group affected is 6th and 7thdecades frequently affecting male patients.[2,4]

Etiology of Inflammatory polyp is unknown, but some authors suggest that it is an allergic reaction due to the presence of eosinophils. Other factors are implicated such as trauma, irritant, genetic alteration and bacteria, physical or chemical stimulants. Activating mutation in the platelet derived growth factor receptor α(PDGFRA) gene have been associated with the development of Inflammatory fibroid polyps. Inflammatory polyp has been showed to occur more frequently in patient with a family history of gastrointestinal polyp.[5] However, there is no evidence of invasion or aggressive metastatic potential.[6]

Clinical presentation

Significant number of cases of inflammatory polyp remain asymptomatic and few present with abdomen pain, acute abdomen and gastrointestinal bleeding. Gastric polyp can produce pyloric obstruction or anemia, whereas polyp in the small bowel present with intestinal obstruction and intussusceptions.[7] In few cases fever can be noted which is attributed to the effect of cytokine release from the inflammatory cells of intestinal polyp.[8]

Our case was a 55year male patient and presented with abdominal pain and intestinal obstruction without fever. Endoscopy revealed a submucosal polypoid intraluminal lesion with surface ulceration. These tumors usually measure 2 to 5 cm at the time of diagnosis.[9] In our case the size was 3cm.

Definitive diagnosis of inflammatory polyp is made with the help of histopathological examination of this specimen. Microscopic shows proliferation of fibroblast as well as blood vessels admixed with inflammatory cells predominantly eosinophils. Perivascular spindle cell onion skinning is present in half of the cases.[10,11]Inflammatory polyp should be differentiated from the spindle cell tumor including gastrointestinal stromal tumor(GIST), leiomyoma , leiomyosarcoma , psammoma and inflammatory myofibroblastic tumor.[11,12]

Immunohistochemistry helps in the diagnosis. Inflammatory polyps are positive for vimentin and CD34 and negative for S-100, CD117 and desmin.[13, 14] Inflammatory fibroid polyp is characterized by long and slow growth and has no malignant potential. Histology depends upon the size of the tumor.

They can be classified into four histopathological groups i.e. classical fibrovascular which shows spindle shaped cells, inflammatory cells and vessels. The remaining are Nodular, Sclerotic and Edematous.[1,9,15]

In our case classical fibrovascular pattern was seen.

Treatment

Depending upon the location, Inflammatory Fibroid Polyp may be diagnosed and treated endoscopically. Surgical excision is required for symptomatic cases which are curative.[16]

Our case presented with intestinal obstruction hence required emergency laparotomy. Post operative follow up in our case is uneventful.

Conclusion

1. Inflammatory polyp is a rare benign tumor of gastrointestinal tract. The tumor has unique microscopic features. The histopathological examination plays an important role in the diagnosis.
2. Clinical presentation and treatment of Inflammatory fibroid polyp depends upon location and size of the lesion.

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