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Inflammatory fibroid polyp of the ileum causing intussusception: A case report

Intususepsiyona neden olan ileumun inflamatuar fibroid polibi: Olgu sunumu

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Inflammatory fibroid polyp is a rare polypoid lesion of the gastrointestinal tract, histologically characterized by an admixture of numerous small blood vessels, fibroblasts and edematous connective tissue, accompanying a marked inflammatory cell infiltrate which contains eosinophils. Although it generally presents as a polypoid mass in the gastric antrum, it can be seen throughout the gastrointestinal tract. It is believed to represent a reactive, nonneoplastic condition, but its histogenesis remains controversial. A case of inflammatory fibroid polyp of the ileum presenting clinically as intestinal obstruction due to intussusception is presented here.

Keywords: Inflammatory fibroid polyp, ileum, intestinal obstruction, intussusception

İnflamatuvar fibroid polip gastrointestinal sistemin nadir görülen polipoid lezyonlarından biridir. Histolojik olarak, ödemli bağ dokusu içinde, fibroblastlar ve çok sayıda kan damarına eşlik eden, eosinofilleri de içeren inflamatuar hücre infiltrasyonunun varlığı ile karakterlidir. Genellikle mide antrumunda yerleşen polipoid bir kitle olarak karşımıza çıkmasına rağmen, gastrointestinal sistemin herhangi bir bölgesinde de görülebilir. Histogenezi tartışmalı olmakla birlikte, neoplastik olmayan, reaktifbir lezyon olduğu düşünülmektedir. Bu makalede, intususepsiyona neden olarak, intestinal obstrüksiyon bulgularına yol açan inflamatuvar fibroid polip olgusu sunulmuştur.

Anahtar kelimeler: İnflamatuvar fibroid polip, ileum, intestinal obstrüksiyon. intususepsiyon

INTRODUCTION

Inflammatory fibroid polyp is a rare, benign, nonneoplastic lesion of the gastrointestinal tract. It originates from submucosa and grows as a polypoid mass (1, 2). It is most often found in the stomach but rare cases in the colon and small bowel have also been reported (2-9).

The lesion was first described by Vanek (10) in 1949 as a "gastric submucosal granuloma with eosinophilic infiltration". A variety of names, such as "eosinophilic granuloma", "hemangiopericytoma", "polypoid fibroma", "gastric fibroma with eosinophilic infiltration", "eosinophilic gastroenteritis", "polyp with eosinophilic granuloma" and "inflammatory pseudotumor", are synonomous for the same lesion (1). But the term "inflammatory fibroid polyp" was first proposed by Ranier and Helwig (11) in 1953 and is now a generally accepted term.

Clinical symptoms may vary according to the location of the lesion (12). When it is in the stomach, most frequently seen symptoms are vomiting, epigastralgia and bleeding. Intussusception and obstruction are symptoms of the lesion located in the small bowel. On the other hand colicky pain, weight loss, diarrhea, bleeding and anemia are seen in colonic lesions.

Inflammatory fibroid polyps can be found in all age groups but peak incidence is between the sixth and seventh decades (3).

Although most of the cases are sporadic, a familial relationship has also been described (13).

CASE REPORT

A 48-year-old man was admitted to our hospital with complaints of nausea, vomiting, abdominal

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pain and distension, which had increased in intensity in recent days. Physical examination revealed a distended abdomen with tenderness on palpation and auscultation. Abdominal X-ray showed dilated small bowel segments. The clinician suspected obstruction in the small bowel, and exploratory laparotomy was performed revealing a solid mass partially obstructing the ileal lumen. Segmental resection of the obstructed ileal segment and end-to-end anatomosis were performed.

Macroscopically, resected ileal segment was 15x4.5x4 cm in diameter. While opening, a solid, cylindrical-shaped 5x2.5x2.5 cm mass projecting into the lumen was found. Its surface was covered with ulcerated mucosa and it was sharply demarcated from the nearby normal- in-appearance mucosa.

On light microscopic examination, the surface of the polypoid lesion was covered by ulcerated mucosa characterized by inflammatory exudate and granulation tissue (Figure 1). The lesion itself was composed of numerous thin- and thick-walled blood vessels and inflammatory infiltrate containing numerous eosinophilic leukocytes in a fibrous stroma (Figures 2 and 3). Bundles of smooth muscle cells separated by connective tissue stroma were also noted (Figure 2). Trichrome stain highlighted the collagenous fibrous tissue background (Figure 4).

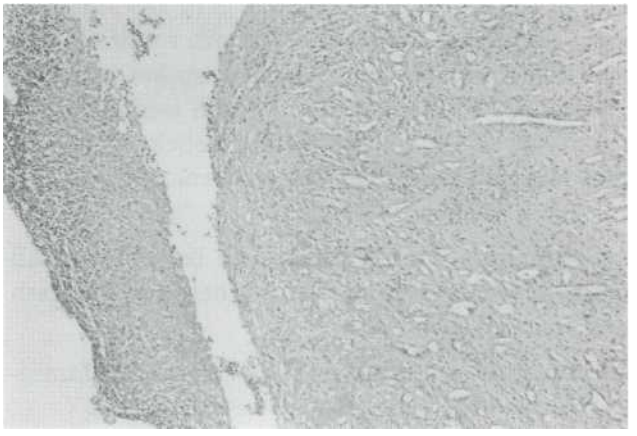

Figure 1. Surface of the polyp showing ulceration characterized by an inflammatory exudate and granulation tissue (H&E, x 200)

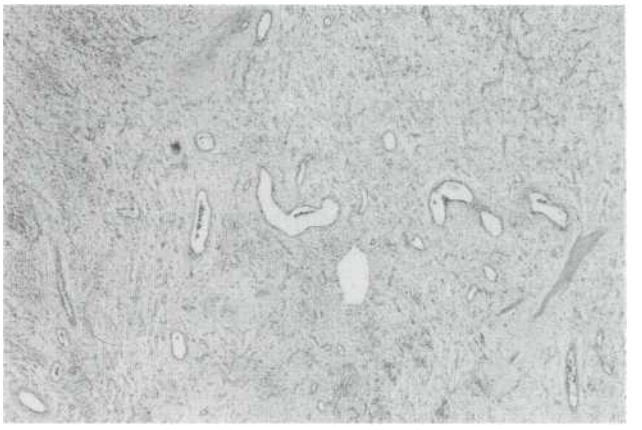

Figure 2. The polyp is composed of edematous,proliferative connective tissue and prominent vascular elements with inflammatory cell infiltrate (note thin smooth muscle bundles in between) (H&E, x 100)

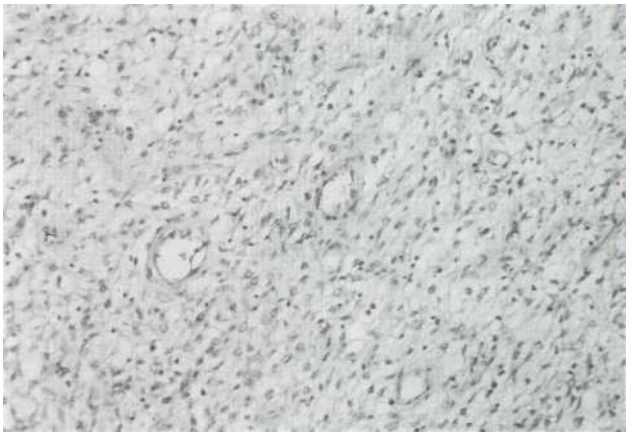

Figure 3. Inflammatory cell infiltrate containing eosinophils in between proliferating, small sized blood vessels (H&E, x 400)

Figure 4. Fibrotic background stroma of the polyp (trichrome stain, x 200)

DISCUSSION

Inflammatory fibroid polyp is a rarely seen, non-neoplastic polypoid lesion of the gastrointestinal tract. It has been reported mostly as a solitary lesion in the antral portion of the stomach, but multiple and rare cases of small intestine and colon involvement have also been reported (1, 3-9, 13).

Macroscopically, it can be seen as a sessile or a pedunculated polypoid lesion (14). The polyp is usually non-encapsulated in appearance and shows an ulceration in the overlying mucosa (3, 8, 9, 14). Microscopically, it is a cellular proliferation possibly originating from the submucosa. It is composed of a fibrous and edematous stroma containing many variable-sized blood vessels and a diffuse inflammatory infiltrate, including eosinophils, plasma cells, lymphocytes, macrophages and mast cells. Increased/abnormal mitosis and cellular atypia are not seen. Although not characteristic, smooth muscle bundles have also been reported in the stroma (6), as in our case. Surrounding mucosa usually shows non-specific changes, and reactive changes are seen in regional lymph nodes.

Although pathogenesis is unknown, the presence of eosinophils in large numbers has led some authors to think that inflammatory fibroid polyp developed on an allergic basis (15, 16). However, there has been no history of allergy in any of the cases reported. Furthermore, eosinophilic infiltration is not a constant and distinctive histologic feature of inflammatory fibroid polyp and can be found in a variety of other gastrointestinal lesions (16). A possible neural hyperplasia in the etiology was suggested (17), but this finding was only in gastric cases and not observed in ileal and colonic localizations (6), like in our case. Although rarely and focally seen in the polyps, the presence of smooth muscle bundles was thought to represent the possible leiomyomatous origin (6). As leiomyoma is the most common tumor in the small intestine and frequently ulcerates, it was thought that at least some cases of inflammatory fibroid polyps may represent ancient leiomyomas that have ulcerated and become secondarily inflamed (6). Another possibility is that the inflammatory fibroid polyp may be a form of granulation tissue (5) or an exuberant host response to an unknown local injury like trauma, bacterial infection, or physical, chemical and metabolic stimuli (11). It has been considered as a proliferation of fibroblasts (1), myofibroblasts (18), endothelial and myocytic cells (19) and primitive submucosal stromal cells showing incomplete fibrohistiocytic differentiation (20) in response to initiators of the process. Although ultrastructural and immunocytochemical studies have not been sufficient to disclose the exact pathogenesis and histogenesis of the lesion, most of the authors now agree that inflammatory fibroid polyp is nonneoplastic in origin.

The clinical presentation and the radiological findings of the lesion may vary according to the location (12, 14). Radiologically, 50% of gastric lesions usually have features of mural masses similar to those of other benign and malignant lesions. The remainder can appear as either pedunculated or sessile intraluminal masses. On the other hand, intussusception is the most common radiologic finding at contrast-enhanced examination for most of the small bowel lesions (14). But it is difficult to determine from these studies the morphology of the leading mass. Since inflammatory fibroid polyps have no distinctive radiologic and clinical findings, histologic confirmation is necessary in all cases to exclude malignancy. Surgical resection of the specimen must be preferred to an endoscopic biopsy for diagnosis due to the submucosal origin of the lesion, which usually shows ulceration in the overlying mucosa (3, 14).

The treatment is surgical resection of the lesion. Inflammatory fibroid polyps are benign lesions with no metastatic potential demonstrated but there have been two reported cases in the literature which showed recurrence after operation (13, 21).

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