E-Da Medical Journal 1 (2014) 14-17

Case Report

Inflammatory Fibroid Polyp of Colon Presented with Colonic Intussusception: Report of a Case

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Inflammatory fibroid polyp (IFP) is a rare benign tumor of the gastrointestinal tract. It is predominantly found in the stomach or small intestine and rarely in the colon. We report a 56-year-old woman with IFP located at descending colon clinically presented with colonic intussusception. Surgical resection of the tumor was performed under the impression of malignancy with colon obstruction. Postoperative course was smooth and no recurrent or metastatic lesion was noted during the follow-up period. We reviewed the literature including 26 cases of IFPs located at the large intestine. Clinical aspects and management of these lesions are discussed. Local excision of the polyp is curative for IFP which is a benign lesion without documented malignant potential. On the other hand, preoperative diagnosis is difficult due to limited endoscopic information, large tumor size, or unusual clinical presentation mimicking malignancy. Endoscopic resection of IFP is the treatment of choice if possible.

Key words: inflammatory fibroid polyp, colonic intussusception

Inflammatory fibroid polyp is a rare benign tumor of the gastrointestinal tract. It is predominantly found in the stomach or small intestine and rarely in the colon. Clinically, it is difficult to confirm the diagnosis and define a treatment plan in the case of a large tumor with uncommon presentation such as colonic intussusception. As we know, only 26 cases of colonic IFP[1] were reported in the literature.

Case Report

A 56-year-old woman suffered from intermittent abdominal cramping pain for 3 months. Pain might subside after stool passage. Blood-tinged stool was noted occasionally. She had body weight loss for 3-4 kg in three months. At admission, vital signs were stable and laboratory data were unremarkable with a serum CEA level of 1.0 ng/ml. Abdominal computerized tomography showed concentric rings sign at descending colon (Figure 1), indicating intussusception. Abdominal sonography also showed concentric ring sign (Figure 2). Under the impression of intussusception, colo-

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noscopy showed a tumor mass with nearly total obstruction at the descending colon (Figure 3). Biopsy showed necrotic tissue only. Radical left hemicolectomy was performed due to suspected colon cancer. Examination of the specimen (Figure 4) showed a large pedunculated tumor about 5×3.5×2.5 cm that was considered the nidus of colon intussusception and obstruction. Microscopic findings (Figure 5) included proliferative fibroblasts, capillaries, and scattered inflammatory cells (eosinophils, plasmacells, lymphocytes). Immunohistochemical study (Figure 6) showed positive staining for Vimentin and CD34, and negative staining for CD117 and SMA. Therefore, benign fibroblastic mesenchymal tumor was diagnosed. The postoperative course was smooth. There was no recurrent or metastatic lesion in the following two years.

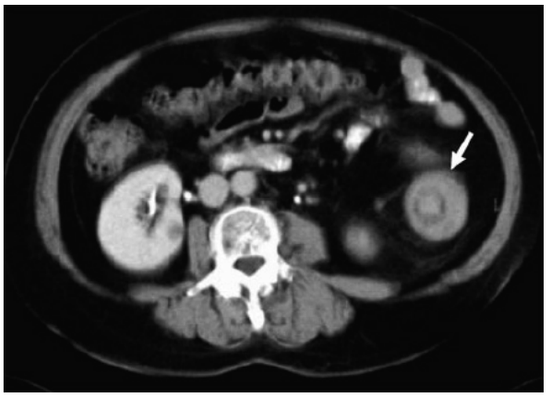

Fig. 1 Abdominal computerized tomography with contrast demonstrating concentric ring sign over descending colon (arrow).

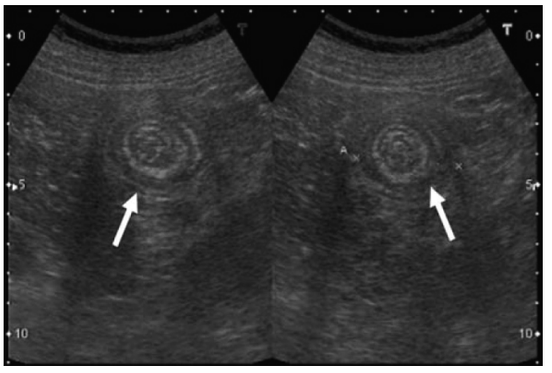

Fig. 2 Sonography showing concentric ring sign (arrow).

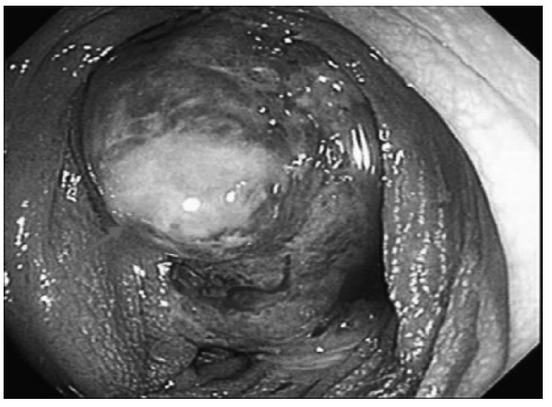

Fig. 3 Large tumor with luminal obstruction noted on colonoscopy.

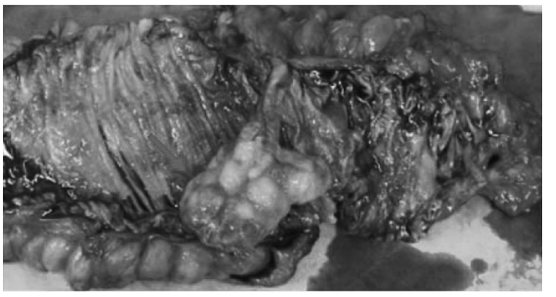

Fig. 4 A pedunculated tumor with homogenous whitish cut-surface measuring 5.0×3.5×2.5 cm.

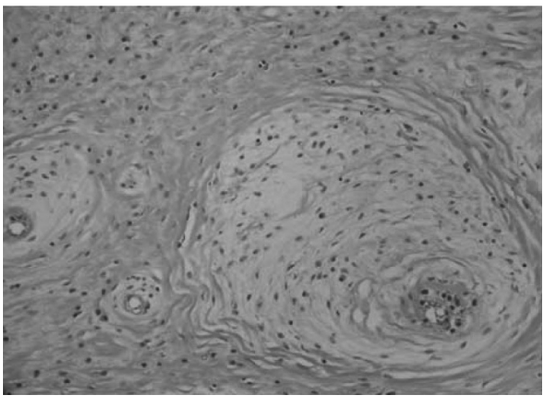

Fig. 5 Photomicrograph (Haematoxylin-eosin, × 100) showing the histological features of the excised mass characterized by vascular and fibroblastic proliferation (often with a specific feature of whorl-like fibroblast arrangement around blood vessels) and inflammatory cell infiltration (eosinophil-dominant with some plasma cells and lymphocytes).

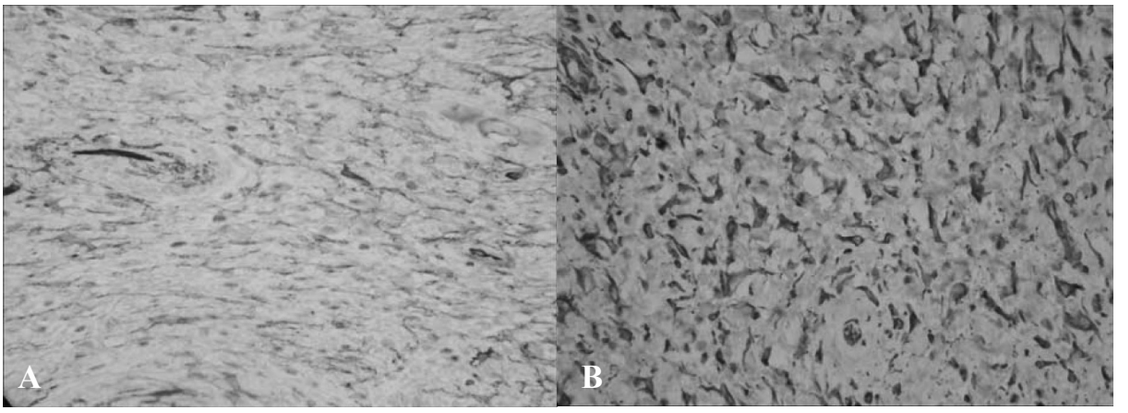

Fig. 6 (A) Immunohistochemical study: CD34 (+), suggesting fibroblastic tumor. (B) Immunohistochemical study: Vimentin (+), suggesting mesenchymal rather than epithelial tumor origin.

Discussion

Inflammatory fibroid polyp (IFP) was first reported as eosinophilic infiltration polyp by Konjetzny in 1920.[2] Since then there have been different terms given to the tumor in the literature. Helwig and Rainer first proposed the term "inflammatory fibroid polyp" in 1953.[3] The polyps are usually solitary and are found in all age groups but most commonly in adults.[3] The lesion locates most often at the gastric antrum, followed by the small intestine, whereas it is rare at the esophagus and large bowel.[4] Histologically, IFP is characterized by an admixture of numerous small vessels, fibroblasts, and edematous connective tissue, accompanied with marked inflammatory infiltration by eosinophils.[5] The proposal that the tumor cells are reactive rather than neoplastic is strongly supported by the observation that their growth is self-limited, rarely recurrent and never metastatic. With regard to the pathogenesis and etiology, some authors have proposed that IFP is a reactive fibroblastic or myofibroblastic lesion[5] caused by an allergic reaction to some inflammatory stimuli of bacterial, chemical, or traumatic origin, while others endorsed the neurogenic nature of the tumor.[6] Although the pathogenesis remains obscure, it is commonly considered a benign polyp without malignant potential and with a low recurrence rate.[6] Literature review showed only 26 cases of IFP located at the large intestine.[1] We summarized the clinical features of these cases in addition to our patient (case 27) in Table 1. The polyp is usually solitary. The size of IFPs ranges from 0.5 cm to 7 cm (median: 4.2 cm) in diameter. Most colonic IFPs are located at the right-sided colon and predominantly occur in males (male/female: 16/6). The types of gross appearance are pedunculated in 68% and sessile in 32% of the reported cases. The clinical presentation may depend on the gross appearance and location.[4] Although there are no characteristic symptoms, abdominal pain and hematochezia are most common. In our patient, abdominal pain is due to colonic intussusception. Of all patients with intussusception, 5% are adults. In contrast to intussusceptions in children for which usually no underlying lesion is identifiable, a demonstrable etiology can be found in 70% to 90% of adult intussception.[7] Moreover, intussusception usually entails acute symptoms in children, while the course may be acute, intermittent, or chronic in adults.[7] A number of imaging studies are useful in the diagnosis of intussusception, including CT scan, barium studies, abdominal ultrasound, plain roentgenogarphy, angiography, and radionucleotide studies.[8] Among these studies CT scanning has been proven to be most

Table 1. Clinicopathological features of colonic IFP

Case	Age, Sex	Location	Gross appearance	Treatment	Year
1	43, F	A	7 cm anular ulceration	ope	1952
2	79, M	C	'Lentil-sized' polyp	None	1952
3	37, M	C	6.5 cm ped	ope	1955
4	67, M	C	3.5 cm ped	SP	1960
5	4, M	T	3.5 cm ped	ISR	1966
6	27, F	A	Hard tumor	ope	1977
7	56, M	C	7 cm mass	ope	1977
8	51, M	S	3 cm ped	SP	1979
9	69, M	T	5 cm ped	ope	1979
10	24, M	T	5 cm tumor	ope	1983
11	8, M	R	3 cm ses	ISR	1984
12-16	NS	4:C, 1:A	1.5-4 cm	1 cecal polyp: EP; the rest: ISR	1984
17	71, M	C	4 cm ped	EP	1985
18	42, M	C	3.5 cm polyp	ope	1992
19-22	24-72, 3M& 1F	3:T, 1:C	3.6-5 cm polyps; 2 ped, 1 ses, 1 plaque-like mass	NS	1992
23	33, F	D	4 cm ped	ope	1995
24	63, F	A	3.5 cm ses	ope	1999
25	45, F	C	0.5 cm ses	EP	2000
26	40, M	A	3.5 cm ped	EP	2004
27	56, F	D	5 cm ped	ope	2006

Abbreviations: M: male, F: female , C: cecum, A: ascending colon, T: transverse colon, D: descending colon, S: sigmoid colon, R: rectum, ped: pedunculated, ses: sessile, ope: surgical operation, SP: surgical polypectomy, EP: endoscopic polypectomy, ISR: intestinal segmentary resection, NS: not specified

useful, followed by ultrasound. The picture of bowel change has been described as "target mass" on both CT and ultrasound. When colonic intussusception is detected in adult, surgical resection is preferred, as almost half of the cases of intussusception at either colon or small intestine are associated with malignancy.[9] Since IFPs are benign lesions without documented malignant potential or metastatic lesion, local excision of the polyp is curative. There are only two reported cases of recurrence after surgical resection in the literature.[10] On the other hand, since preoperative endoscopic diagnosis of IFP based on biopsy specimens is difficult, surgical resection has been performed in most cases. For a pedunculated or a smaller polyp, endoscopic polypectomy should be the treatment of choice. Nevertheless, a stiff stalk of the polyp, location of the polyp at a turning point of the intestine, and large-sized polyps that obstruct endoscopic vision significantly contribute to technical difficulty in endoscopic polypectomy. When diagnosis of IFP cannot be confirmed preoperatively and obstruction persists, surgical intervention is indicated regardless of the nature of the lesion. Of course, if malignancy is confirmed preoperatively, radical resection is warranted, whereas limited resection is adequate for benign lesions. Therefore, preoperative definite diagnosis is still important. In the future, the number of IFPs suitable for minimally invasive endoscopic treatment will probably increase due to the increasing popularity of colonoscopic examination.

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