

EOSINOPHILIC GRANULOMA OF THE COLON SIMULATING CARCINOMA

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ABSTRACT

Eosinophilic granuloma of the colon was diagnosed in a 66-year-old woman, presented with chronic abdominal pain. Barium enema study showed concentric mass with sinus tract. Left hemicolectomy was performed because of carcinomatous appearance and the histopathology revealed eosinophilic granulomatous infiltration of the colon.

Keywords: Eosinophilic granuloma, colon, barium enema

INTRODUCTION

Eosinophilic granulomatous infiltration of the gastrointestinal tract is uncommon disease, and frequently involves the stomach and the small intestine. The colon is rarely involved. This is a case report of eosinophilic granuloma of the colon. The contrast radiographic examinations and the histopathology were illustrated.

CASE REPORT

A 66-year-old Thai female patient presented with chronic abdominal pain for 1 year. She was diagnosed to have dyspepsia and relief symptoms by medical treatment. In this admission, she complained about severe left upper quadrant pain.

Physical examination showed left upper quadrant tenderness.

The basic laboratories were normal. There was no leukocytosis or peripheral eosinophilia. CEA was within normal limit. CXR and plain abdomen were unremarkable.

Upper GI study and small bowel follow through revealed diverticula at second and third part of duodenum. The remainders were unremarkable. (Figure 1)

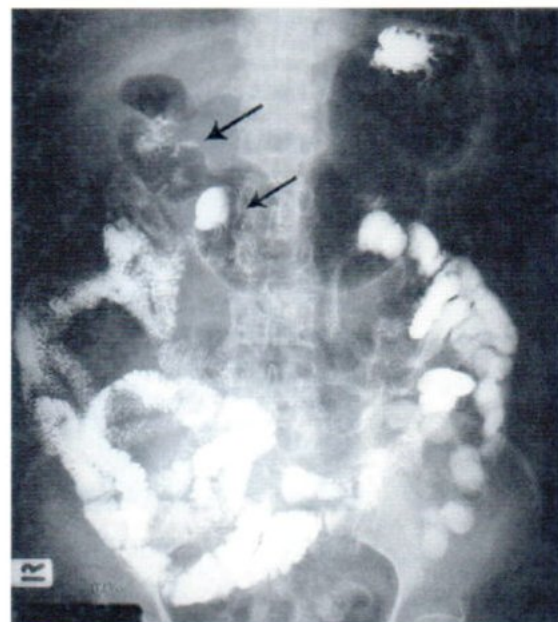


Fig.1 Small bowel follow through shows duodenal diverticula at second and third part (black arrows).

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Barium enema study revealed smooth concentric submucosal mass, 4 cm long, at the descending colon. There was a sinus tract deep to the mass, 1.5 cm long. This radiographic study was mimicking carcinoma. (Figure2-3)

Intraoperatively, 4-cm firm to hard mass of the descending colon was seen. This looked like carcinoma, so that left hemicolectomy was performed.

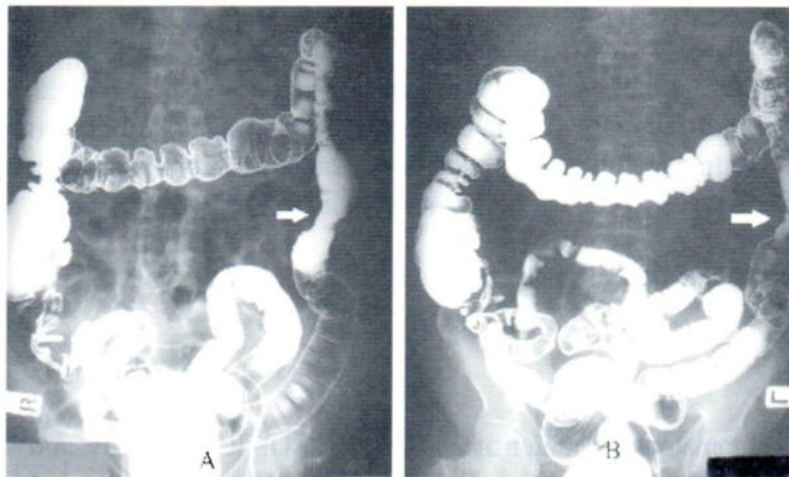


Fig.2 (A and B) Overhead films of barium enema study show concentric submucosal mass at descending colon (white arrows)

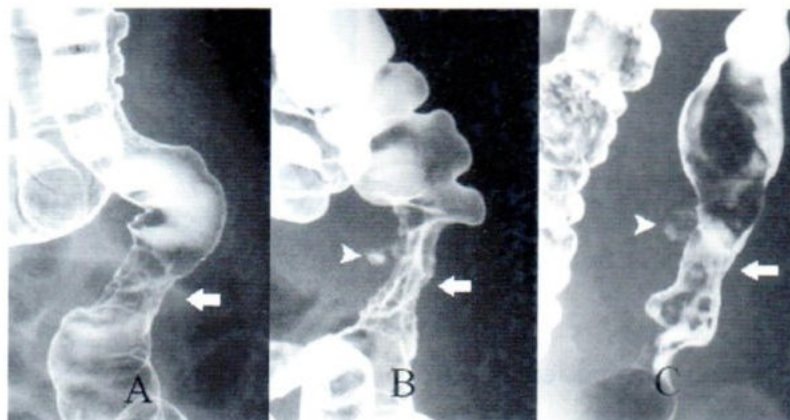


Fig.3 (A-C) Spot films at the lesion of descending colon.
A: Smooth concentric mass (white arrow) represents submucosal lesion.
B: Subsequent film shows sinus tract (arrowhead) deep into the submucosal mass (white arrow)
C: Post-evacuation film shows more barium filled in the sinus tract (arrowhead)

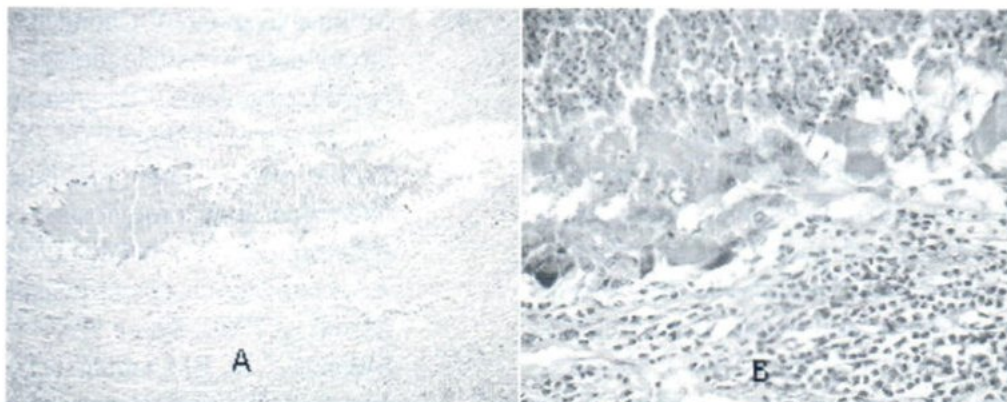


Fig.4A Low magnification demonstrates granuloma with central necrosis.

Fig.4B High magnification reveals granuloma with central neutrophilic aggregates and necrosis. The surrounding tissue exhibits some eosinophils, lymphocytes and plasma cells.

At histopathology, the segment of colon, 34 cm long, showed a 4 cm long infiltrative gray-brown lesion, involving the whole circumference, at 14 cm far from one end. The lesion was 1-2 cm thick and extended to pericolic fat. The lumen was markedly narrow. Some small pericolic lymph nodes, 0.1-0.5 cm in diameter, were dissected. Microscopic examination revealed extensive inflammatory cell infiltration in the bowel wall, including predominantly eosinophils, lymphocytes and plasma cells, as well as some granulomas with central neutrophilic aggregation and necrosis (figures 4). The lesion was most likely parasitic tract, although no parasite was found.

The patient had a complete recovery, post-operatively without complication.

DISCUSSION

Eosinophilic gastroenteritis is an unusual condition, characterized by eosinophilic infiltration of the gastrointestinal tract. The most common sites of involvement are the stomach and the small intestine. The colon and esophagus are rarely involved. About half of patients have allergic disease and there are leukocytosis and peripheral eosinophilia.^{22, 24-25} Some are associated with causative agents such as parasitic

infestations from anisariasis, angiostrongiliasis, gnathostomiasis, hookworm and other nematodes, particularly in the edemic area.^{1-2,4-5,14,20-21} This disorder may be associated with autoimmune connective-tissue diseases, such as scleroderma, dermatomyositis and polymyositis.^{6,23}

Clinical symptoms are related to the site and extent of the gastrointestinal involvement, such as abdominal pain, nausea, vomiting, GI bleeding, diarrhea, malabsorption, bowel obstruction, bowel perforation and peritonitis.^{4,9-13,15-17,19-22}

For this case, eosinophilic granulomatous infiltration of the colon is thought to be caused by parasitic infestation although the larvae or parasites can not be demonstrated at the histopathologic pictures. In the literature, some cases could be diagnosed from a history of raw food or causative fish ingestion for few hours to few days, before the onset of symptom, together with radiologic findings and particularly histopathologic pictures. The remainder could be diagnosed from history, radiologic examination and IgE antibody to the parasite.^{1-2,8-9,11,14} Unfortunately, in my institute there is no facilities for serologic examination.

The radiologic findings of eosinophilic gastroenteritis are mucosal edema, nodularities, thickening folds, submucosal mass, narrowing, rigidity and sometimes together with bowel obstruction.^{1-2,5,12,14,18} The rarity of eosinophilic gastroenteritis, non-specific presenting features and radiologic findings make it easy to be misdiagnosed initially as a malignant tumor,^{3,7,19,21} as in this case. The presence of peripheral eosinophilia may be helpful in establishing the diagnosis, but it could be normal in about 25% of the cases. The other disorders that may be accompanied by eosinophilia are for examples parasitic infection, vasculitis, lymphoma, carcinoma or inflammatory bowel diseases. The IgE antibody to parasite is helpful in the suspicious cases.

In conclusion, eosinophilic granuloma is one of the differential diagnosis of submucosal mass, among stromal tumors, lymphoma and carcinoma particularly in the patient, who resides in the endemic area of parasitic infestation or who has allergic history.

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