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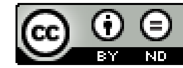
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Case Report:

Eosinophilic Gastroenteritis Presenting as Intestinal Obstruction - A Case Series.

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Abstract: Eosinophilic Gastroenteritis is a rare disease characterized by infiltration of the gastrointestinal tract by an increased number of eosinophils as compared to the normal. The anatomic location and intensity of the infiltrate decides the varied clinical symptomatology with which these patients present. The present report deals with four cases, all presenting with clinical signs of intestinal obstruction A laparotomy performed revealed a stricture in the first case, superficial ulcers and adhesions in the second case, an ileocaecal mass in the third case and volvulus formation in the fourth case. Eosinophilic gastroenteritis was confirmed on histopathology in all the four cases. All the four patients experienced relief of symptoms after resection. It is essential to diagnose the disease to differentiate it from other conditions presenting as intestinal obstruction. The cases are presented because of the rarity of occurrence and presentation. Relevant literature has been reviewed.

Key Words: Gastroenteritis; Eosinophils; Intestinal obstruction; Ascites

Case Report:

The details on all the four cases are outlined in the tables 1 and 2. Table1 shows the clinical manifestations and ultrasound findings (US) and table 2 depicts the other laboratory, gross and histopathologic findings.

Table 1: Clinical manifestations, ultrasound findings and clinical diagnosis.

No.	Age / Sex	Symptoms	US	Clinical diagnosis
1	55/F	Pain and distension of abdomen- three months. Constipation - three days. Similar complaints six months back – managed conservatively	Fluid filled loops; ascites; mesentric lymph nodes-enlarged	Intestinal tuberculosis. Started on anti tuberculous therapy.
2	23/M	Abdominal pain on and off -15 days. Vomiting - two days.	Ascites	Intestinal obstruction ? cause
3	39/F	Pain in the right lower quadrant of the abdomen with vomiting-one week.	Mass in right iliac fossa. Minimal ascites	Intestinal obstruction ? due to neoplasm
4	20/F	Pain abdomen and vomiting - one day	Ascites	Sub acute intestinal obstruction ? cause

Table 2: Laboratory, gross and histopathological findings in all the four cases.

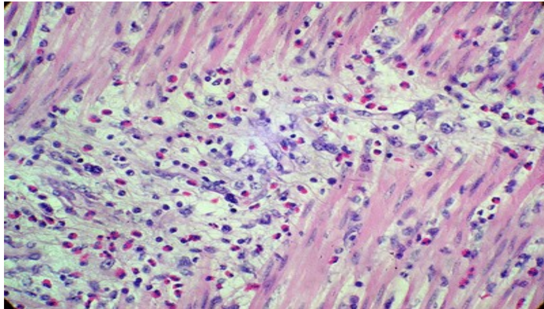
No.	Lab findings	Gross findings	Microscopy and histopathologic diagnosis
1	AEC[a]-200 cells /cu mm. Chest X ray-NAD[b] Stool examination-NAD. Montoux test-negative ESR-normal	20cm of small bowel with a stricture located three cm from one resected margin. Mucosa over the stricture – ulcerated Three lymph nodes identified.	Mucosal ulceration and transmural infiltration by eosinophils. Impression: Eosinophilic enteritis with stricture
2	AEC-310 cells /cu mm. Chest X ray-NAD Stool examination-NAD.	A segment of small intestine 60 cm in length with caecum and ascending colon measuring six cm in length. Small intestine showed adhesion of loops with mucosal hemorrhage and multiple ulcers varying from 0.3 to 0.6 cm over a length of 15 cm. Two mesenteric lymph nodes identified each measuring 0.5 cm across.	Mucosal ulceration, hemorrhage and transmural infiltration by eosinophils Impression: Eosinophilic enteritis with intestinal adhesions
3	AEC-150 cells /cu mm. Chest X ray-NAD Stool examination-NAD.	Ileum, caecum, appendix and a part of ascending colon measuring 26 cm in length. Small intestine was coiled up to form mass six cm in diameter. Cut surface of mass like lesion -necrotic and hemorrhagic. Areas of gangrene noted.	Transmural infiltration by eosinophils over a localized area with reaction and fibrosis. Impression: Eosinophilic enteritis with pseudotumor formation
4	AEC-600 cells /cu mm Chest X ray-NAD Stool examination-NAD.	Ileum, appendix and caecum. Ileum-35 cm Adhesions noted with looped up small intestine. Cut surface -NAD	Mucosal ulceration, submucosal congestion and transmural infiltration by eosinophils Impression: Eosinophilic enteritis with volvulus

a- Absolute eosinophil count (AEC) Normal range-40-440 cells/cu mm b- NAD-No abnormality detected

Discussion:

First described by Kaiser in 1937, EGE is a rare disease.[1] Only about 280 cases are published in the medical literature. In India, Venkataraman et al have reported seven cases of EGE over a ten-year period.[2] Diagnosis is one of exclusion and the criteria put forward for the diagnosis are the presence of gastrointestinal (GIT) symptoms, infiltration of the GIT by eosinophils in one or more areas, absence of parasitic infestation and exclusion of eosinophilic involvement in organs other than the GIT.[3] All criteria were met with in the cases of present series.

EGE commonly occurs in the fifth decade and has a slightly male preponderance.[3] The present study showed a female preponderance. Clinically, patients usually present with nonspecific symptoms like abdominal pain, nausea, vomiting, diarrhea, weight loss and abdominal distention.[3-5] Occasionally they present with GIT obstruction. A high degree of suspicion is required to establish the diagnosis. Klein et al categorized three pathologic types of EGE with corresponding clinical symptomatology depending on the depth of involvement of the bowel wall layers.[4] Patients with mucosal involvement present with malabsorption and protein loosing enteropathy, those with muscular involvement present with obstruction of bowel or sometimes as an obstructing caecal mass or intussusception, and serosal involvement usually presents with ascitis.



Section of small intestine showing infiltration of eosinophils through all the layers. (Hematoxylin & eosin, X400)

In the present series all patients presented with intestinal obstruction and ascites. The first was clinically misdiagnosed as tuberculosis due to the presence of a stricture and treatment had been started which was discontinued after the histopathologic diagnosis. In the other three cases a definite cause for obstruction could not be ascertained clinically. What was unusual in the present series was formation of pseudotumor which was mistaken clinically for a neoplasm (Case 3). The last case (Case 4) was also misleading due to volvulus formation. Awareness that this entity may lead to pseudotumor which may be mistaken for an abdominal neoplasm has to be kept in mind. Adhesions leading to volvulus and stictures are other sequelae. All the four cases showed transmural infiltrate by eosinophils (Figure1).The serosal involvement was the cause of ascites. As a rule peripheral eosinophilia is present in 80% of the cases. In the present series it was an associated finding in only one case. No other cause for eosinophilia was seen in this case. None of the cases showed any clinical evidence of other organ involvement.

The eosinophilic infiltrate may be patchy and hence easily missed. Therefore a laparoscopic full thickness biopsy is required. Diagnosis can be missed if only serosal disease is present.

Treatment in EGE is administration of steroids, surgery being done only in cases of complications like obstruction, perforation or bleeding. In the present series all patients required surgery. Since the nature of disease is unknown, long term follow up is recommended.

The present report has been made for the rarity of the lesion, its unusual presentation and under diagnosis by pathologists leading to a low incidence of reporting in the literature.

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