CASE REPORT

Eosinophilic Gastroenteritis with A*scites* in a Child

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Background: Asctites is rare in eosinophilic gastroenteritis. **Case characteristics:** An 11-year-old boy who presented with abdominal pain and ascites. **Observation:** Peripheral blood examination revealed eosinophilia; serum IgE levels were raised. Biopsy from gastric antrum revealed marked eosinophilic infiltration of mucosa. **Outcome:** The child's symptoms and clinical findings improved after corticosteroids and anti-allergy treatment for 2 weeks. **Message:** Children presenting with unexplained gastrointestinal symptoms in the presence of ascites should be investigated for the gastrointestinal tract allergic disease.

Keywords: *Abdominal pain, Ascites; Endoscropy, Eosinophilia.*

Eosinophilic gastroenteritis is a rare disease of unknown etiology, and is characterized by focal or diffuse eosinophilic infiltration of the gastrointestinal tract. Eosinophilic gastroenteritis occurs over a wide age range – from infancy through the seventh decade – but most commonly presents between second to fifth decades of life [1]. In recent years, pediatric eosinophilic gastroenteritis is increasingly being diagnosed. The clinical presentation is variable, and its correct diagnosis mainly depends on the histological findings. We present eosinophilic gastroenteritis in a child with main presentation of ascites.

CASE REPORT

An 11-year-old boy presented to us with abdominal pain for 7 days. He had no history suggestive of tuberculosis and he was not taking any medications. His medical history revealed no personal or family history of gastrointestinal disorders, contact with tuberculosis or history of allergies. On admission, the patient looked pale; abdominal examination revealed periumbilical tenderness with ascites. Rest of the systemic examination was normal. He had a white blood cell count (WBC) 7.98×10^9/L with eosinophil levels of 31%. His erythrocyte sedimentation rate, C-reactive protein level, plasma amylase and urine amylase was normal; total IgE level was 354 (normal <100) mIU/mL. Bone marrow examination showed increased eosinophils in bone marrow. Stool examination for ova and parasites was negative. The results of food allergies showed that he was allergic to egg. Ultrasonography and computed tomography (CT) scan showed abundant ascites. Ascitic fluid study revealed high total leukocyte count (1005/mL, 93% eosinophils), serum ascetic fluid to albumin gradient (SAAG) 0.8 g/L. and lactic dehydrogenase (LDH) 608 IU/L. Esophagogastroduodenoscopy revealed hyperemia and edema, scattered hyperemic patchy mucosal lesions and hemorrhagic spots in the gastric antrum and duodenum. Gastric antrum biopsy showed marked eosinophilic infiltration in the mucosa (40/high power field) (***Fig.* 1**).

The patient was diagnosed as Eosinophilic gastroenteritis and treated with prednisolone (20 mg/d) and cetrizine (10mg) for two weeks. His symptoms improved rapidly, and the eosinophil count normalized within 2 weeks. Prednisolone was tapered over 8 weeks

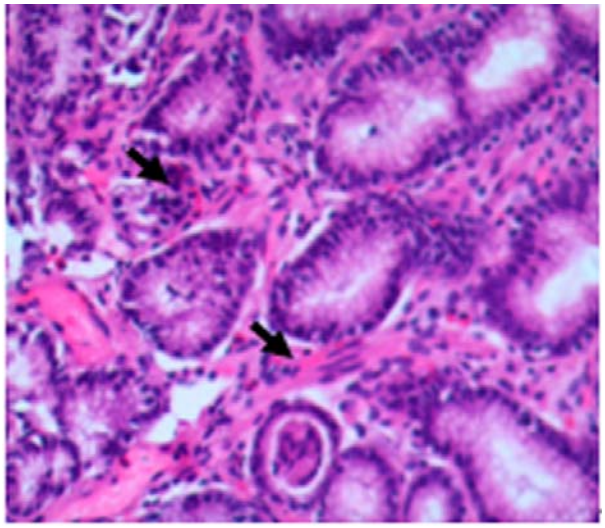

FIG. 1 *History of antral biopsy specimen demonstrating marked eosinophilic infiltrationin hyperemic patchy mucosa. (See color image at website).*

and cetirizine was used for about 4 months. The follow-up eosophagogastro duodenoscopy after 5 months showed normal antral and duodenal mucosa.

DISCUSSION

Eosinophilic gastroenteritis is a rare disease of unknown etiology and is defined as a gastrointestinal disorder of undetermined cause characterized by infiltration of eosinophils in the gastrointestinal tract. A strong history of allergy is usually prevalent in these eosinophilic gastroenteritis patients, especially in the pediatric population [1]. The present case satisfied criteria of eosinophilic gastroenteritis [2]: (*a*) presence of gastrointestinal symptoms; (*b*) biopsies demonstrating eosinophilic infiltration of one or more areas of the gastrointestinal tract, or characteristic radiological findings with peripheral eosinophilia; and (*c*) no evidence of parasitic or extra-intestinal disease.

The clinical manifestations of eosinophilic gastroenteritis range from non-specific gastrointestinal complaints to more specific symptoms such as protein-losing enteropathy, luminal obstruction and eosinophilic ascites. In the past few years, a number of cases of ascites as a clinical manifestation of eosinophilic gastroenteritis in adults and children have been published [3-5]. There is no standard treatment for eosinophilic gastroenteritis, but steroids, anti-allergy treatment and allergy avoidance are often prescribed [6]. In severe cases refractory to medical management, and in those with stenotic lesions, surgical resection of the affected areas may be indicated. The child in present report responded satisfactorily to medical management.

We conclude that eosinophilic gastroenteritis should be suspected when unexplained gastrointestinal symptoms are present along with peripheral esonophilia.

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