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World J Gastroenterol 2008 April 14; 14(14): 2270-2271
World Journal of Gastroenterology ISSN 1007-9327

CASE REPORT

Steroid responsive eosinophilic gastric outlet obstruction in a child

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Received: September 7, 2007 Revised: December 14, 2007

Abstract

Gastric outlet obstruction is a rare complication of eosinophilic gastroenteritis, most commonly treated surgically. We report a case of eosinophilic gastric outlet obstruction in a child that responded to conservative medical management. A brief review of this clinical entity is also provided.

Key words: Eosinophilic gastroenteritis; Pylorus; Gastric outlet obstruction; Steroids

Peer reviewer: Luigi Bonavina, Professor, Department of Surgery, Policlinico San Donato, University of Milano, via Morandi 30, Milano 20097, Italy

Kellermayer R, Tatevian N, Klish W, Shulman RJ. Steroid responsive eosinophilic gastric outlet obstruction in a child. *World J Gastroenterol* 2008; 14(14): 2270-2271 Available from: URL: http://www.wjgnet.com/1007-9327/14/2270.asp DOI: http://dx.doi.org/10.3748/wjg.14.2270

INTRODUCTION

Eosinophilic gastroenteritis or gastroenteropathy (EG) is defined by variable gastrointestinal symptoms and eosinophilic infiltration of one or more areas of the gastrointestinal tract, without evidence of parasitic or extra-intestinal disease[1]. It can be idiopathic, related to food allergies, infections, and rarely infantile inflammatory bowel disease[2]. A very rare complication of this entity is distal gastritis leading to gastric outlet obstruction that has been reported to occur in infancy accompanying, mimicking or generating hypertrophic pyloric stenosis[3,4] and in adults[5,6], but has not been described in children as an isolated manifestation of EG. Most commonly patients with eosinophilic gastric outlet obstruction have been treated surgically[3,5,7] except for a few infantile cases where protein hydrolysate formula[2] or steroid therapy[4,8] has been used. Resolution of symptoms with steroid treatment has recently been demonstrated in an adult case also[6]. We report a 2 and half-year-old Caucasian girl with eosinophilic gastric outlet obstruction treated successfully with steroids.

CASE REPORT

The previously healthy girl presented after a 3-mo history of worsening postprandial emesis leading to an inability to tolerate feedings. She had no history of atopy or diet change. She had 0.08 eosinophils (740×10^6 /L) on peripheral blood count, but was not anemic nor hypoalbuminemic. IgE level was normal. Upper gastrointestinal imaging showed marked pyloric narrowing (Figure 1). Endoscopy revealed antral edema and severe pyloric stenosis through which a Pentax 2470 endoscope (8.0 mm diameter) could not be passed. Biopsies from this area were consistent with eosinophilic gastritis (Figure 2A). Methylprednisolone (2 mg/kg per day) was started and she began tolerating liquids within two days. Endoscopy five days later revealed decreased pyloric swelling and the endoscope could be passed through the pylorus. No pyloric ulceration was seen and the duodenum appeared normal. Antral and pyloric mucosal biopsies showed resolution of the eosinophilic cellular infiltrate (Figure 2B). She was advanced to a low roughage diet within a few days, switched to oral prednisolone therapy (0.5 mg/kg per day) and discharged home. The steroids were weaned and discontinued after 8 weeks of treatment. She remained symptom free six months following the cessation of steroids.

DISCUSSION

Reported clinical manifestations of eosinophilic gastroenteritis include obstruction at various levels of the

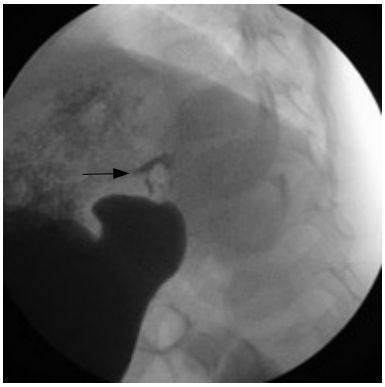

Figure 1 Upper gastrointestinal image of the patient. Note the minimal advancement of the contrast material through the pylorus (arrow).

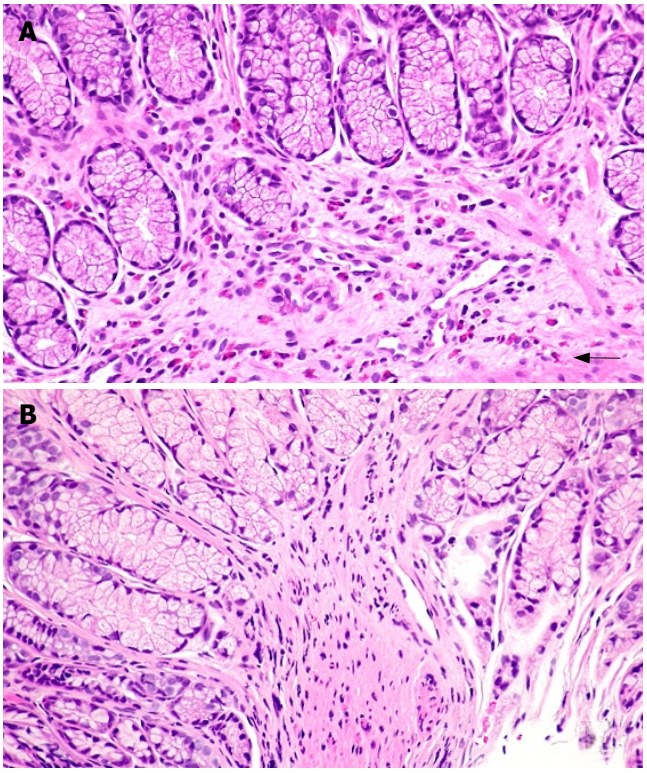

Figure 2 Histologic images before and 5 d after steroid therapy. **A**: Peripyloric antral sections showed prominent eosinophilic infiltration of the lamina propria (up to 30 eosinophils per single high power field), with occasional degranulation (arrow) of eosinophilic content and infiltration of the muscularis mucosae; **B**: Biopsies 5 d after intravenous steroid therapy demonstrated only a few eosinophils with a peak count of 2 eosinophils per high power field (HE, x 40).

gastrointestinal tract, growth failure, weight loss, anemia, melena, diarrhea, protein loosing enteropathy, abdominal pain, pseudo-Crohn's disease, esophagitis, and eosinophilic ascites[9]. On rare instances EG can even be complicated by gastrointestinal perforation[10]. While eosinophilic inflammation leading to pyloric stenosis and gastric outlet obstruction has been reported in adults and infants, it has not been described in children (pediatric patients more than 2 years of age) as a localized manifestation of EG to our knowledge. We could only identify one earlier case of antral web related gastric outlet obstruction that was complicated by eosinophilic inflammation in a 3-years-old child[11]. Our patient responded briskly to steroid therapy and has remained asymptomatic for more than six months off therapy. Similar clinical response has been recorded earlier in infants with the same condition[4,8] and very recently in an adult[6]. However, in several instances resolution of the eosinophilic inflammation can be protracted and the course of the disease may wax and wane[4,10]. Nevertheless, we conclude that steroid therapy should be considered in cases of eosinophilic gastric outlet obstruction prior to surgical interventions in all age groups.

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S- Editor Ma L **L- Editor** Wang XL **E- Editor** Yin DH