Surgery Journal 1 (2-4): 45-48, 2006

Eosinophilic Gastroenteritis: A Case Report

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Abstract: Eosinophilic Gastroenteritis (EG) is a rare inflammatory disorder of the gastrointestinal tract of unknown cause. It is divided into three groups according to the predominant of eosinophilis infiltration : predominant mucosal, muscular, or subserosal disease. A fourth group of patients had abdominal symptoms and unexplained peripheral eosinophilia. The gold standard for diagnosis usually demonstrated on endoscopic biopsies. There may be some difficulties in establishing the diagnosis because of patchy disease. Eosinophlic gastroenteritis should be considered in any cases with unexplained gastrointestinal symptoms.

Key words: Eosirophilic gastroenteritis, symptoms, disease, inflammatory,

INTRODUCTION

Eosinophilic Gastroenteritis (EG) is a rare inflammatory disorder of the gastrointestinal tract of unknown cause.

It is characterized by the appearance of digestive symptoms with eosinophilic infiltration which occurs in the gut layers and was first described by Kaijser in 1937[1].

Eosinophilic gastroenteritis is generally classified according to the layer of gastrointestinal tract involved.

Mucosal involvement may result in abdominal pain, nausea, vomiting, diarrhea, weight loss, anemia, protein-losing enteropathy and intestinal perforation. Patients with muscular layer disease would generally have obstructive symptoms. Subserosal involvement is only found in 10% of the cases and is typically manifested as ascites with an eosinophilic rich content[2] .

Here we would like to present our experience in a case of EG with unusual presentation.

Case presentation: The 36-year old patient was in good health until 2 months before her hospital admission. During those 2 months, she suffered from progressive abdominal distention and weight loss (3 kgs in 2 months) due to nausea and vomiting.

She was initially admitted at another hospital for tapping of peritoneal cavity and laparoscopy for analysis of ascites. The etiology was yet unknown when she visited the second hospital where TB peritonitis or peritoneal carcinomatosis was highly suspected.

Exploratory laparotomy with peritoneal biopsy was suggested but was refused by her family subsequently, she visited our hospital for further evaluation.

Plain abdomen showed diffuse ileus and high radio-opacity due to asciters Fig. 1. Endoscopic study of UGI tract revealed severe congested gastropathy Fig. 2. Abdominal computed tomographic scan showed marked wall thickening, dilatation at second portion of duodenum and massive ascites Fig. 3-5. The abdominal tapping didn't show any malignant cells or infection. It was followed by laparoscopic biopsy of the peritoneum and pathologic report was chronic inflammation and fibrosis without tumor cells or granuloma.

Nephronic syndrome was excluded by the nephrologists according to her clinical symptoms and laboratory data.

Ttuberculosis (TB) peritonitis was highly suspected though the Mycobacterium Tuberculosis Polymerase Chain Reaction (MTB-PCR) and study of ascites were negative results.

Anti-TB treatment was therefore given for clinical trial and she was discharged with clinical improvement.

Unfortunately, she was brought to our emergency room 5 days later due to abdominal fullness with ascites and poor intake. Elevated liver function (AST/ALT: 276/162 IU/L) was also noted. So the anti-TB treatment was hold in order to stop the possible drug toxicity on liver.

The result of her hepatology profile (HBV, HCV, IgM anti-HAV) was found to be negative. Repeat endoscopic

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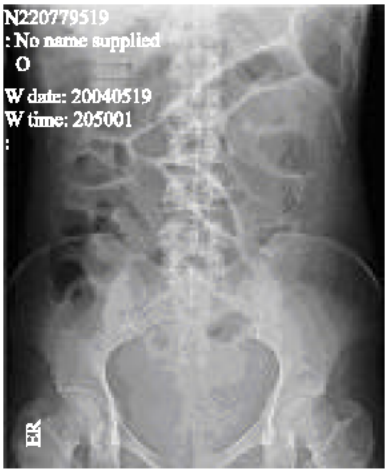

Fig. 1: Plan abdomen showed marked diffuse ileus

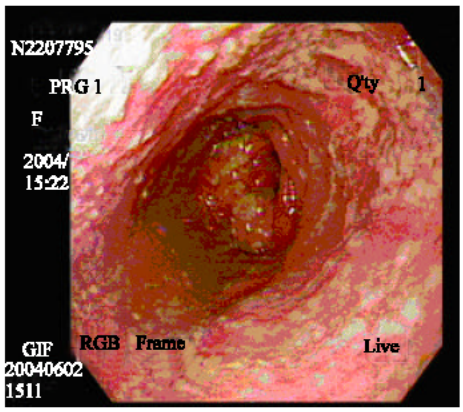

Fig. 2: Congested gastropathy was seen in pan-endoscpy

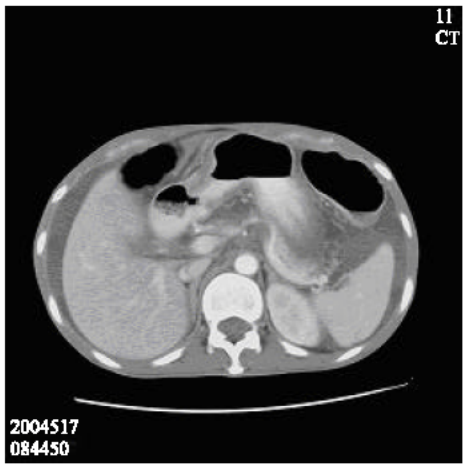

Fig. 3: Contrast study of the UGI tract revealed dilatation of the second portion of duodenum.

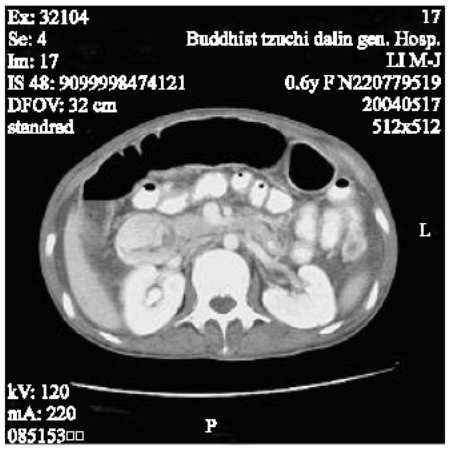

Fig 4: Thick duodenal wall was identified in the abdominal CT

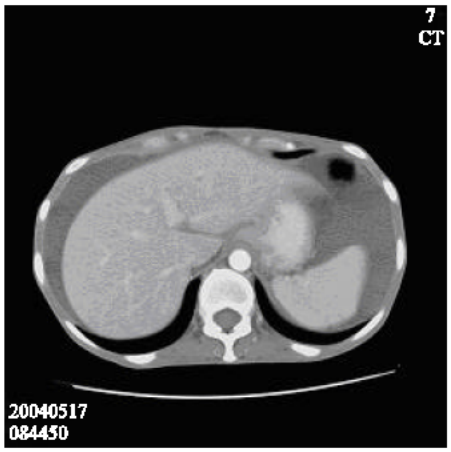

Fig. 5: Massive ascites in the abdominal CT

study indicated hyperemic mucosa of duodenum chronic inflammation with proliferating fungal hyphae. Upon reviewing her medical record, transient eosinophilia was noted since her first admission. Thus, eosinophilic gastroenteritis was included for the possible cause of massive ascites.

Prednisolone was prescribed after thorough explanation to her and family. Interestingly, her appetite and oral intake improved and was discharged 2 weeks after admission.

The condition improved with excellent recovery. The dosage of prednisolone was thus lowered gradually to a maintain dose and discontinued after 3 months.

DISCUSSION

Epidemiology and clinical manifestation: Patients usually present Eosinophilic Gastroenteritis (EG) clinically during the third to fifth decades of life, though the disease can

affect any age group from infancy up to the seventh decade. EG itself has been strongly associated with food allergies and concomitant atopic diseases or with a family history of allergy which is elicited in about 70% of the cases.

The usual symptoms of EG include abdominal pain, anorexia, bloating, postprandial nausea, vomiting, weight loss and diarrhea. But there are also some case reports of subserosal type of EG manifested with ileus and ascites[3,4].

Our patient was a 36-year old female who was admitted for massive ascites with unknown origin for more than 2 months.

The clinical symptoms were nausea, vomiting and body weight loss, but no diarrhea during that period. Besides, she denied any significant allergic history before.

Diagnosis: The gold standard for the diagnosis of EG, which is usually demonstrated with endoscopic biopsies, is prominent tissue eosinophilia. However, the diagnosis may be obscured by the patchy nature of the disease as well as the muscular and subserosal eosinophilic gastroenteritis subtype[5]. During endoscopy, hyperemic mucosa over duodenum and severe congested gastropa; thy was identified in our case. The abdominal CT revealed moderate ascites and thick duodenal wall and dilatation Fig. 1, 2 but the biopsy result failed to prove it to be EG, Peripheral eosinophilia is seen in approximately two-thirds of the patients with eosinophilic gastroenteritis.

Parasite infection or other identifiable causes (inflammatory bowel disease, connective tissue disease, malignancy and adverse effects of drugs, etc.) should be excluded for the diagnosis of EG.

Radiological diagnosis with peripheral eoinophilia were identified for diagnoses of some cases of eosinophilic gastroenteritis. The computed tomographic scan usually revealed ascites and marked wall thickening and dilatation of the intestine. We notice similar findings in our study.

As the level of anti-nuclear antibody was within normal range rheumatic disorder was excluded. MTB-PCR was negative and the anti-TB drugs didn't improve the clinical condition.

Sono-guide aspiration in our case revealed a high 12% eosinophil count but no malignant cells. At the same time, the serum eosinophil count was also found to be high 8.8%.

Laparoscopic biopsy of the peritoneum revealed only chronic inflammation and fibrosis without tumor cells or granuloma

Unlike other types of EG, the subserosal type always presents itself with atypical symptoms and signs. It is difficult to see the eosinophilic infiltration on subserosal EG without a full-thickness biopsy.

Recently, some case reports indicated that the subserosal type of eosinophilic gastroenteritis showed eosinophilic ascites and demonstrated that eosinophilic infiltration did not predominate in the gastrointestinal tract[4,6]. A fourth group of patients was identified with abdominal symptoms and unexplained peripheral eosinohphilia but no proven eosinophilic infiltration of the gut[7].

After all, our patient should be placed into the category of the uncommon form of EG

Treatment course: The symptoms of EG are usually dramatically relieved after short courses of corticosteroids were used.

These symptoms usually subside within two weeks but some patients with relapsing disease will require long-term and low-dosage steroids.

Other drugs such as sodium cromolyn, ketotifen and/or elimination diets have been shown to be effective in the management of patients who have a significant history of allergic disorder.

Surgical intervention may be required in patients with obstructive complications or refractory disease[2].

Our patient got dramatic improvement ith steroid treatment and was discharged with oral prednisolone (5 mg, BID for 14 days) under the stable condition. The steroid was then tapered gradually as the conditionimproved. After 3 months of treatment with oral prednisolone, the ascites disappeared and she gained 7 kilograms of body weight. There was no symptom of relapse even after one year cessation of prednisolone until recent follow-up.

CONCLUSION

The subserosal type of EG is difficult to be diagnosed even under the endoscopic biopsy. Sometimes, it presents itself only as massive ascites with peripheral eosinophilia.

Although, there is no evidence of eosinophilic infiltration in the gastrointestinal tract, treatment with prednisolone produced a dramatic response. A high index of suspicion in cases of peripheral eosinophlilia with concomitant gastrointestinal symptoms and/or unknown massive ascites is needed for the early diagnosis of such an uncommon entity of EG.

Laparoscopic diagnostic study is strongly recommended for such a case to prevent unnecessary exploratory laparotomy

We also believe that diagnosis of EG is very important because it is a curable disease and most of the cases respond very well to the steroid treatment.

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