International Journal of Advances in Medicine
Dhas CJ et al. Int J Adv Med. 2018 Aug;5(4):1078-1080
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: http://dx.doi.org/10.18203/2349-3933.ijam20183152

Case Report

Eosinophilic gastroenteritis in an immunosuppressed patient: a case report

Clement J. Dhas*, Murali A., Yoganathan C.

Department of General Medicine, PSG Institute of Medical sciences and Research, Peelamedu, Coimbatore, Tamil Nadu, India

Received: 02 February 2018
Accepted: 07 March 2018

***Correspondence:**
Dr. Clement J. Dhas,
E-mail: drclementjenil123@gmail.com

ABSTRACT

Eosinophilic gastroenteritis is a rare disease that is characterized by Eosinophil infiltration in one or multiple segments of the gastrointestinal tract. The etiology of this condition remains unknown. Eosinophilic gastroenteritis has heterogeneous clinical manifestations that depend upon the location and depth of infiltration in the gastrointestinal tract, and eosinophilia may or may not be present. This article reports a case of Eosinophilic Gastroenteritis in a 57 years old retroviral male patient, who presented with chronic diarrhea, bilateral pedal edema and eosinophilia. Ultimately, the diagnosis of eosinophilic gastroenteritis was clinched. The rare character of eosinophilic gastroenteritis and its varied clinical presentations often lead to delayed diagnosis and complications. Case reports may help to disseminate knowledge about the disease, thereby increasing the likelihood of early diagnosis and intervention to prevent complications.

Keywords: Chronic diarrhea, Eosinophilic gastroenteritis

INTRODUCTION

Eosinophilic gastroenteritis (EG) is classified in a group of diseases known as eosinophilic gastrointestinal disorders (EGIDs). The primary EGIDs are defined as diseases that selectively affect the gastrointestinal tract with the presence of inflammatory infiltrate that is rich in eosinophils in the absence of other causes of eosinophilia, such as drug reactions, parasitic infections, or malignancies. This group of diseases, the incidence of which has increased over the last few decades, includes eosinophilic esophagitis, eosinophilic gastritis, eosinophilic enteritis, eosinophilic colitis, and EG.[1] All of these conditions exhibit significant infiltration of eosinophils in the gastrointestinal tract and a very strong association with allergies.[2] In 1970, Klein classified the disease according to the predominance of eosinophilic infiltration in different layers of the intestinal wall, namely, the mucosal, muscle, and sub serosal layers.[3]

The involvement of different layers usually gives rise to different clinical manifestations. Mucosal disease generally presents with bleeding, protein-losing enteropathy, or malabsorption. Involvement of the muscle layer may cause bowel wall thickening and subsequent intestinal obstruction. The sub serosal form usually presents with eosinophilic ascites. The diagnosis for EGIDs is established after ruling out other causes of an eosinophilic disease, particularly atopy, parasitic infestations, vasculitis, and hyper eosinophilic syndrome (HES). Authors report a typical case of widespread EG with associated involvement of colonic mucosa in which symptoms dramatically responded to a course of steroids, as evidenced by careful follow up.

CASE REPORT

57 years old male, diagnosed with HIV 1 infection 2 months back, started on anti-retroviral drugs (Tenofovir,

Lamivudine, Efavirenz) presented with complaints of loose stools (3-4 episodes/day) for 2 months and B/L swelling of legs for 4 days. He also had history of loss of weight and appetite. He had no history of atopy/ food or drug allergies. He was treated with nitazoxanide but without any improvement. His CD_4 count was 751 cells and HIV viral load was 880IU/L. HBsAg, anti HCV and TPHA were negative.

On examination he was thin built and had pitting pedal edema. Systemic examination revealed no abnormalities. Investigations showed anaemia (Hb-9.8 g%) and eosinophilia (67.1%) (Absolute eosinophil count 8,700 cells/cu.mm). Liver function test showed hypoproteinemia, elevated alkaline phosphatase and GGT levels. serum LDH, uric acid were within normal limits. Since he was an immunosuppressed host, opportunistic infections were first considered. Stool examination with modified ZN stain for microsporidium, isospora and cryptosporidium were negative.

Stool examination for other ova and parasites were also negative. Radio allegro sorbent test (RAST) for a battery of allergens including common foods were negative. As he had granulomatous hepatitis picture, CECT abdomen was done to look for intraabdominal lymphadenopathy which showed transmural thickening in caecum, ascending colon and proximal transverse colon, with few enlarged mesenteric lymph nodes. Upper GIscopy and deep duodenal biopsies were normal. Colonoscopy showed ileal nodularity, biopsies were taken from multiple sites of colon.

As a part of workup for granulomatous hepatitis, liver biopsy was done. Histopathological examination of liver biopsy showed lobular inflammation with many eosinophils, heavy inflammatory infiltrate including many eosinophils. Ileal biopsy also demonstrated tissue eosinophilia. He was started on T. prednisolone 60 mg (1mg/kg/day). Complete remission of the diarrhea occurred in about one week. One month later, the patient's bowel habits were normal, and he had gained 4 kg.

DISCUSSION

Eosinophilic gastroenteritis can involve any part of gastrointestinal tract from the esophagus down to the rectum. The stomach and duodenum are the most common sites of involvement.[4-7] Four criteria are required for the diagnosis of EG: the presence of gastrointestinal symptoms, eosinophilic infiltration of the gastrointestinal tract, exclusion of parasitic disease or other identifiable cause of eosinophilia and the absence of other systemic involvement.[8-10]

Eosinophils are normal constituents of the mucosa of the gastrointestinal tract; however, the number of eosinophils that can be defined as normal in a biopsy specimen has not been clearly defined.[10] Peripheral eosinophilia is not necessary to make a diagnosis, but it is present in approximately two-thirds of patients and is more prevalent in the serosal than in the mucosal and muscular disease forms.[11,12] The presence of peripheral eosinophilia, abundant eosinophils in the gastrointestinal tract, and a dramatic response to corticosteroid provide some support that the disease is mediated by a hypersensitivity-type reaction. Moreover, a study at Mayo Clinic showed that 50% of patients with EG give a history of allergy such as asthma, allergic rhinitis, urticaria, drug allergy, and eczema.[13]

It must be emphasized that in the mucosal form of the disease, multiple biopsies must be taken during endoscopy, because mucosal involvement is often patchy in nature. Treatment with a steroid is the mainstay in the management of EG. Dramatic clinical improvement is seen after treatment with a low dose of steroid. The duration of treatment is controversial, however. This patient was started with prednisolone 60 mg daily, then tapered over (a period of 6 weeks) and responded favourably.

Due to the positive retroviral status in present patient, authors at first, ruled out opportunistic infections. Not many cases of EG in immunosuppressed patients are reported in literature. Bacterial infections (*Helicobacter pylori*, etc) and parasitic infestations (Ascaridosis, Anisakiasis, Enterobiasis, Anchylostomiasis, Trichina, Teniasis, etc) are a well-known cause of EG, but in present patient neither bacteria in gastric biopsies or stool culture nor ova and parasites were found in the stools.[14-16]

Hypereosinophilic syndrome (HES) may be associated with gastroenteritis but was ruled out because it is an idiopathic condition characterized by marked peripheral eosinophilia exceeding 1500 cells/ml for six consecutive months and its major targets are the heart, lung, brain and kidneys, with>55% of patients presenting with a complication in≥ 1 of these sites.[17] Celiac disease was excluded since deep duodenal biopsy showed normal histologic pattern. In present case, no positive food allergen could be demonstrated, and the colonic involvement makes it similar to the pure form of EG, in which a positive RAST test is rarely found.[3]

CONCLUSION

Eosinophilic gastroenteritis is an uncommon disease with signs and symptoms similar to many other diseases. It is quite rare in immunosuppressed patients, which is why it is often not considered in the differential diagnosis. Histology is essential for the diagnosis of EG and should be considered. Making the correct diagnosis early may result in effective treatment, thereby achieving quicker remission.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Rothenberg ME. Eosinophilic gastrointestinal disorders (EGID). J Allergy Clin Immunol. 2004;113:11-28.
2. Guajardo JR, Plotnick LM, Fende JM, Collins MH, Putnam PE, Rothenberg ME. Eosinophil-associated gastrointestinal disorders: a worldwide- web based registry. J Pediatr. 2002;141:576-81.
3. Klein NC, Hargrove RL, Sleisenger MH, Jeffries GH. Eosinophilic gastroenteritis. Medicine (Baltimore). 1970;49:299-319.
4. Daneshjoo RJ, Talley N. Eosinophilic gastroenteritis. Curr Gastroenterol Rep. 2002;4:366-72.
5. Khan S, Orenstein SR. Eosinophilic gastroenteritis. Gastroenterol Clin North Am. 2008;37:333-48.
6. Chen MJ, Chu CH, Lin SC, Shih SC, Wang TE. Eosinophilic gastroenteritis: clinical experience with 15 patients. World J Gastroenterol. 2003;9:2813-6.
7. Khan S. Eosinophilic gastroenteritis. Best Pract Res Clin Gastroenterol. 2005;19:177-98.
8. Furuta GT, Forbes D, Boey C, Dupont C, Putnam P, Roy SK, et al. EGIDs Working Group. Eosinophilic Gastrointestinal Diseases (EGIDs). J Ped Gastroenterol Nutr. 2008;47:234-8.
9. Baig MA, Qadi A, Rasheed JA. Review of Eosinophilic Gastroenteritis. J National Med Assoc. 2006;98:1616-9.
10. Straumann A. Idiopathic eosinophilic gastrointestinal diseases in adults. Best Pract Res Clinical Gastroenterol. 2008;22(3):481-96.
11. Okpara N, Aswad B, Baffy G. Eosinophilic colitis. World J Gastroenterol. 2009;15:2975-9.
12. Talley NJ, Shorter RG, Phillips SF, Zinsmeister AR. Eosinophilic gastroenteritis: a clinicopathological study of patients with disease of the mucosa, muscle layer and subserosal tissues. Gut 1990;31:54-8.
13. Solans R, Bosch JA, Perez-Bocanegra C, Selva A, Huguet P, Alijotas J, et al. Churg-Strauss syndrome: outcome and longterm follow up of 32 patients. Rheumatology (Oxford). 2001;40:763-71.
14. DeSchryver-Kecskemeti K, Clouse RE. A previously unrecognized subgroup of 'eosinophilic gastroenteritis'. Association with connective tissue diseases. Am J Surg Pathol. 1984;8:171-80.
15. Muller MJ, Sewell GS. Coexistence of eosinophilic gastroenteritis and Helicobacter pylori gastritis: causality versus coincidence. Dig Dis Sci. 2001;46:1784-6.
16. Macedo T, MacCarty RL. Eosinophilic ileocolitis secondary to Enterobius vermicularis: case report. Abdom Imaging. 2000;25:530-2.
17. Scudamore HH, Phillips SF, Swedlund HA, Gleich GJ. Food allergy manifested by eosinophilia, elevated immunoglobulin E level, and protein-losing enteropathy: the syndrome of allergic gastroenteropathy. J Allergy Clinical Immunol. 1982 Aug 1;70(2):129-38.

Cite this article as: Dhas CJ, Murali A, Yoganathan C. Eosinophilic gastroenteritis in an immunosuppressed patient: a case report. Int J Adv Med 2018;5:1078-80.