ISSN- O: 2458 - 868X, ISSN–P: 2458 – 8687
National Library of Medicine - ID: 101731606

International Journal of Medical Science and Innovative Research (IJMSIR)
IJMSIR : A Medical Publication Hub
Available Online at: www.ijmsir.com
Volume – 6, Issue – 1, January – 2021 , Page No. : 200 - 203

Eosinophilic Ascitis, an uncommon presentation of Eosinophilic gastroenteritis – A case Report

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Citation this Article: Dr. Archana Joshi, Dr. Vidula Gowardhan, Dr. Ashwini Sonwane, "Eosinophilic Ascitis, an uncommon presentation of Eosinophilic gastroenteritis – A case Report", IJMSIR- January - 2021, Vol – 6, Issue - 1, P. No. 200 – 203.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Eosinophilic ascitis is a rare and most unusual presentation of eosinophilic gastroenteritis. It is characterized by eosinophilic infiltration of any or all layers of the gut wall and may involve any segment of the gastrointestinal tract. Peripheral eosinophilia may or may not be present.We report a case of 55 year old female who presented with gastrointestinal symptoms and ascites.Blood counts and ascitic fluid examination showed evidence of eosinophilia. She was evaluated for eosinophilic gastroenteritis after high index of suspicion and excluding other causes of eosinophilia. Colonic and upper gastrointestinal biopsies confirmed a diagnosis of eosinophilic gastroenteritis .Ascitic fluid eosinophilia, mucosal biopsies with infiltration with eosinophils and dramatic response to steroids confirmed the diagnosis of eosinophilic gastroenteritis with eosinophilic ascitis.

Keywords: Ascitis, Eosinophilia, Eosinophilic gastroenteritis.

Introduction

Eosinophilic ascitis is a rare disorder associated with eosinophilic gastroenteritis. Eosinophilic gastroenteritis is an uncommon disease characterized by eosinophilic gastroenteritis. [1] It may involve more than one layer of the gastrointestinal tract.[2,3] Clinical presentation of eosinophilic gastroenteritis varies not only by the affected site, but also with the depth of eosinophilic infiltration of the gut walls.[4,5,6] The mucosal involvement leads to abdominal pain, diarrhea, and malabsorption while involvement of the muscularis may manifest with symptoms of obstruction.[7] Serosal involvement is rare and can result in eosinophilic ascites.2,3 We report a case of eosinophilic gastroenteritis manifesting as ascites in an old woman.

Case Report

A 55year old female was admitted with complaints of progressive distension of abdomen and pain in abdomen associated with increased frequency of bowel motion since 3 months. The pain was not related to meal.

There was no history of fever, weight loss, jaundice. No history of blood or mucus in the stool. No history of specific food allergy, travel history, drug allergy. She had no significant past or family history. Physical examination disclosed a moderately developed, conscious woman. She was afebrile. There was no icterus. Cardiovascular system was normal. Chest examination demonstrated dullness on percussion over the lower zones. The abdomen was distended and diffusely tender.

Shifting dullness was present.

No lymphadenopathy or hepatosplenomegaly were found.

JVP was normal.

Investigations: Routine investigations revealed leukocytosis of 24,000/cmm with 30% eosinophils. (Fig.1)

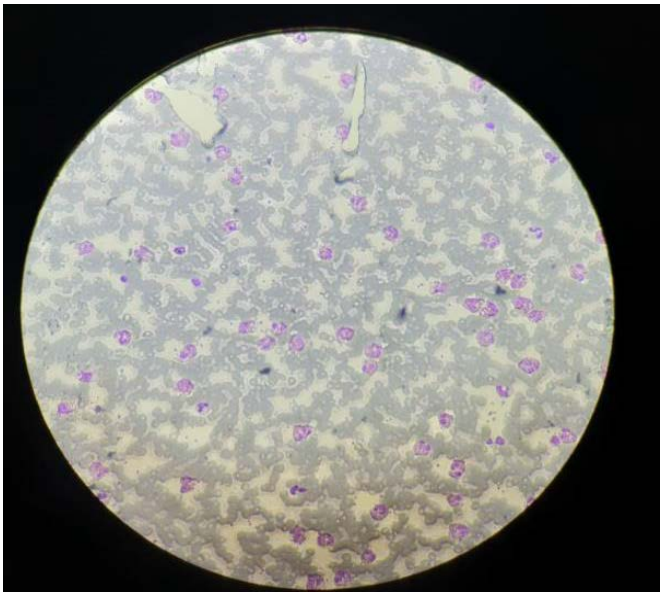

Figure 1

The full blood count was otherwise unremarkable. Stool for parasitological examination and bacteriological culture were negative. KFT, LFT, Serum electrolytes, coagulation status, and thyroid profile were normal. On abdominal ultrasonography, there was free fluid.

Diagnostic ascitic tap was done. It revealed increased WBC count with significant number of Eosinophils .

The blood film showed mature eosinophils. Bone marrow aspirate showed increased number of eosinophil precursors. However blast cells are not seen.

Endoscopic examination revealed erythematous patches at fundus. Colonoscopy revealed thickening of colonic mucosa. The histological examination of of biopsy of these lesions showed increased eosinophilic infiltration in the lamina propria.

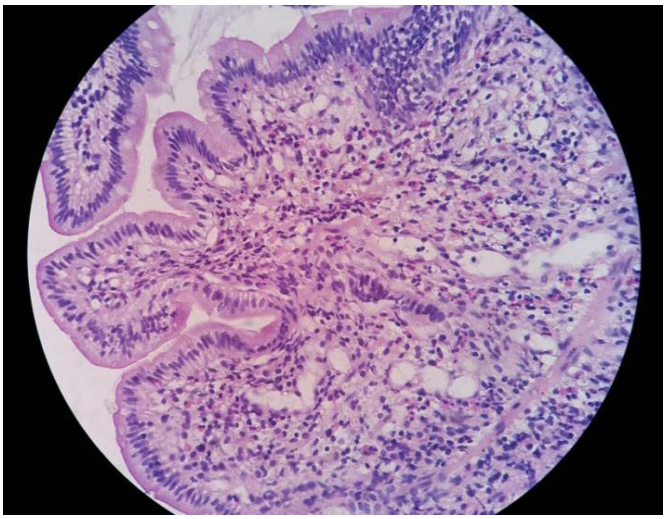

Figure 2

These features suggested the diagnosis of eosinophilic gastroenteritis and colitis. The diagnosis of eosinophilic gastroenteritis with eosinophilic ascitis was based on presence of peripheral eosinophilia ,eosinophilic ascitis and eosinophilic infiltration of gut wall.

Discussion

Eosinophilic gastroenteritis [EGE] is characterized by eosinophil rich inflammation in The gut wall in absence

of known causes of eosinophilia. EGE is a rare gastrointestinal disorder that can present with various gastrointestinal manifestations, depending on the specific site of the affected gastrointestinal tract and specific layer of affected gastrointestinal wall. 3

EGE is a rare disease and was first described by Kaijser in 1937.1 In 1970, Klein classified the disease according to the predominance of eosinophilic infiltration in different layers of the intestinal wall like mucosal, muscle and subserosal layers.3,4,5 The different clinical manifestations are seen with involvement of different layers. Mucosal involvement produces bleeding, protein loosing enteropathies or malabsorption.

Involvement of the muscle layer may cause bowel wall thickening and subsequent intestinal obstruction7 .The subserosal form usually presents with eosinophilic ascites which is the most unusual presentation of EGE.

The role of the eosinophils in the gastrointestinal tract is limited to their role in innate anti-parasite immunity, which brings about a regulatory influence on the function of other lymphocytes, participation in antigen presentation. There is no clear cut reason for accumulation of eosinophils in mucosa, but their degranulation leads to a severe inflammatory response in the mucosa via reactive oxygen species formation, eosinophil derived neurotoxins and halide aids.

Substances formed in the eosinophilic granules, major basic protein [MBP] I & II as well las eosinophilic cationic protein [ECP] accumulate in the extracellular spaces of interstitial tissue. Eosinophils are normally present in various tissues at low levels in the GIT. They are mainly seen in the lamina propria but not in payer's patches. But in EGE, there are increased numbers of eosinophils in these areas. Disease activity correlates with the eosinophilic concentration in the tissue.

Clinical manifestations depend on the affected layers. The mucosal form of EGE manifests with abdominal pain, nausea, vomiting, and diarrhea. Muscularis involvement results in thickening of the intestinal wall and may lead to obstruction.4,5,6 The serosal form is the most unusual and leads to eosinophilic ascitis.

Eosinophilic ascites is often accompanied by pleural effusion as seen in our patient. In serosal form of EGE, mucosal biopsies may not contain eosinophils. There are no single diagnostic tests that lead to diagnosis of EGE when it is suspected on the basis of clinical presentation, other causes of hypereosinophilia such as drug reaction, parasitic infestation, malignancy should be excluded.

Conclusion

Eosinophilic ascitis is a rare presentation of eosinophilic gastroenteritis and usually associated with serosal involvement. It should be suspected in a patient with ascitis in absence of liver disease and with unexplained chronic or relapsing gastrointestinal symptoms. Histopathology is essential for diagnosis, But there are limitations due to patchy mucosal infiltration and paucity of mucosal infiltration in the predominant serosal form. Although laproscopic serosal biopsies may be required for a definitive diagnosis, ascetic fluid eosinophilia and dramatic response to treatment with steroids indirectly confirm the diagnosis.

References

1. YQ Hsu,CYF Lo A case of eosinophilic gastroenteritis HKMJ June 1998;4(2):226-228
2. Tayfun Temiz,Selcuk Yaylaci, Mustafa Volkan Demir,Zeynep Kahyaoglu,Ali Tamer and Mustafa lhsan Uslan Eosinophilic gastroenteritis: A rare case report N AM J Med Sci.Aug 2012;4(8):367-368

3. Lung –Chih Cheng ,Gin-Ho Lo ,Chao-Ming Wu Ping-l Hsu,and Kwok-Hung Lai Ascitis due to eosinophilic gastroenteritis: A case report J Intern Med Taiwan 2009;20:81-85
4. Iryna S Hepburn,Subbaramiah Sridhar,Robert R Schade Eosinophilic ascitis ,an unusual presentation of eosinophilic gastroenteritis: A case report and review World Journal of Gastrointestinal Pathophysiology 2010;1(5):166-170
5. Elliott JA,Mc Cormac O,Lim KT,Ullah N et al Eosinophilic gastroenteritis manifesting as eosinophilic ascitis:A case report J Genet Syndr Gene Ther 2013,S3-009 4/72/2157-7412
6. PS Singh ,SRS Kushwaha Eosinophilic ascitis ,an unusual presentation of eosinophilic gastroenteritis. J Indian Med Assoc 2014;112:117-8 and 123
7. Amita Krishnappa,Shameem A shariff Ashok D Kumar Eosinophilic gastroenteritis presenting as intestinal obstruction-A case series Online Journal of Health an Allied Sciences 2011;10(2):21