

Case Report

Eosinophilic Granuloma of Jejunum

Dr. B. Ananda Rama Rao¹, Dr. J. Shalini², Dr. Sai Kumar. P²

¹Professor of General Surgery, ²Junior Resident,
SVS Medical College, Mahabubnagar, TS 509002

Corresponding Author: Dr. B. Ananda Rama Rao

ABSTRACT

Eosinophilic granuloma of gastrointestinal tract represents part of systemic allergic response to one of a number of non-specific allergens. The nature of disease is primarily altered vascular response but can also present as tissue changes like necrosis and granuloma formation. Diagnosis is usually made postoperatively on biopsy of the specimen. Here we discuss such a case in a 30 year old male presented with vomiting; indigestion as chief complaint and a diagnosis of intussusception is made.

Key Words: Eosinophilic granuloma, systemic allergic response, altered vascular response.

INTRODUCTION

The gastrointestinal eosinophilic granuloma is mainly an allergic phenomenon, a local or part of systemic reaction. The etiology of the lesion is possibly due to ingestion of some food stuffs, parasites localised in the lumen, or part of systemic allergic reaction. ^[1] The presentation of eosinophilic granuloma in gastrointestinal tract is variable, depending upon the site and extent, of lesions and of systemic allergic reactions. ^[2] There is no specific treatment for this condition. Conservative treatment is the most rational approach in non obstructive cases, which include administration of steroids, intravenous fluids, gastric aspiration for small bowel granuloma causing sub acute obstruction and surgery is indicated for obstructive cases presenting as an acute abdomen where diagnosis is usually in doubt. ^[1-5] Diagnosis is confirmed on histology and is made after resection of the involved bowel for mechanical reasons. The histology of the specimen shows edematous connective tissue stroma with an increase of capillaries, lymphatics and numerous

diffuse eosinophilic infiltrations. The extent is usually confined to the sub mucosa, but sometimes it can spread to muscle layer splitting the muscularis mucosae. The mucosa is almost always intact. ^[1]

CASE REPORT

A thirty year old male, moderately built and ill nourished, presented with chief complaints of vomiting after taking food and vomitus contains same unaltered food contents, since one week. There is no history of diarrhea, pain abdomen and fever. History of recent loss of weight upto 10% is present. On examination he did not seem to be particularly ill but was clinically dehydrated. Abdomen was neither tense nor distended. Epigastric tenderness is elicited with no palpable mass. UGI endoscopy was done which showed duodenal ulcer upto the second part. Barium meal examination revealed cut-off's in proximal jejunum. A diagnosis of mass lesion in jejunum is suspected and exploratory laparotomy was done. On laparotomy, a mass lesion was found at ten centimeters from DJF along with few enlarged lymph nodes adjacent to

it. Resection of the mass was done and end to end jejuno-jejunal Anastomosis was performed. Postoperative period was uneventful. Patient was discharged within seven days. Specimen on gross examination revealed circumferential thickening of the jejunal wall resulting in a narrowed lumen and also a roundworms seen within the

lumen of jejunum. On histological examination, ulceration of jejunal wall is present and an oedematous connective tissue stroma with increase of capillaries and lymphatics, and showing a massive diffuse eosinophil-cell infiltration, usually confined to sub mucosa, suggesting features of Eosinophilic granuloma of jejunum.

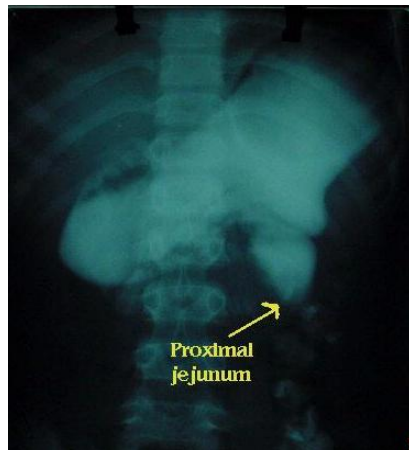


Fig-1 Barium meal s/o cut-offs in proximal jejunum



Fig-2 Jejunal mass and mesenteric LN

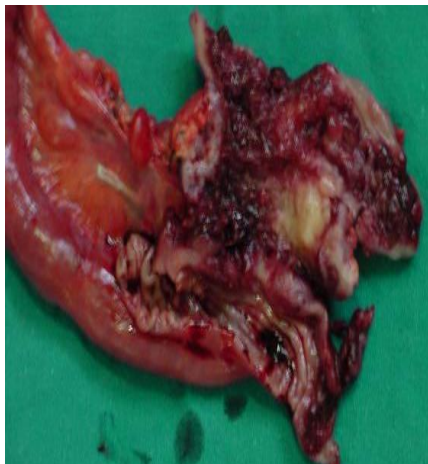


Fig-3 Circumferential thickening of jejunal wall



Fig-4 Roundworm in jejunal lumen



Fig-5 Ulcerated jejunum & granulation tissue

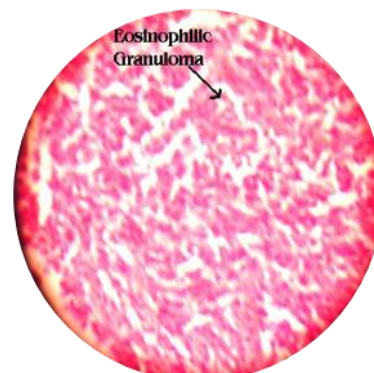


Fig-6 Eosinophilic granuloma

DISCUSSION

Eosinophilic granuloma of the gut represents a local allergic response to ingested non specific allergens or response to repeated infection to the gut wall due to infested parasite (*E.rotundatum*) causing granuloma or it can form a part of systemic allergic reaction. [1] Distribution of the lesions is variable depending upon the site like pharynx, pyloric antrum, duodenum, jejunum, ileum, appendix, caecum, colon, rectum [2,19] It can occur in two forms, diffuse and localized. The diffuse lesions may involve a long or a short segment and characterized by either local or generalized circumferential thickening of the mucosa of small intestine causing annular constriction. [1,6-10] Whereas, the localized form show single or multiple polypoid lesions with some long stalks, and these cases may present as intussusceptions. [11-15] In some patients the mesenteric lymph nodes were enlarged, as in our case. Pathophysiology of the lesion mainly comprises of abundant eosinophilic infiltration of the mucosa, sub mucosa and it can extend into muscularis mucosa. The Serosa is almost always intact. Eosinophils are predominantly tissue-dwelling cells, and few circulating in the blood. Most are to be found in the bone marrow, where they are formed, and in the lamina propria of the gastrointestinal tract, where they act as a protective mechanism against parasites. Eosinophils respond to stimuli, including trauma, infection, and allergens, by degranulating to release inflammatory mediators including leukotrienes, vasoactive intestinal polypeptide, tumour necrosis factor, and interleukins. [16] Eosinophil density in gastrointestinal tract is increased in various disorders including food allergy, parasitic infections, and inflammatory bowel disease. The involved segment of intestinal wall shows thickening, edema with dark yellow/red discoloration and loss of serosal sheen. Occasionally giant cells, few plasma cells and lymphocytes are seen. This appearance is similar to that of Crohn's disease. [4,5,17-18] When any lymph nodes are

involved they show similar histological picture, with abundant eosinophils. Parasites may also be found in the lumen.

CONCLUSION

This report presents a comprehensive review of eosinophilic granuloma of the gastrointestinal tract. This view put forwards that eosinophilic granuloma mainly represent part of a systemic allergic response to one of a number of non-specific allergens.

REFERENCES

1. Ashby, B. S., Appleton, P. J., and Dawson, I. (1964) "Eosinophilic granuloma of gastro-intestinal tract caused by herring parasite *Eustomarotundatum*". *Brit. med. J.*, 1, 1141-1145.
2. P. R. Salmon and J. W. Paulley. (1967) "Eosinophilic granuloma of gastrointestinal tract," *Gut*, vol 8(1):8-14, 1967.
3. Kuipers, F. C. van Thiel, P. H., and Roskam, E. T. (1960a) "Eosinofieleflegmone van de dunne darm, veroorzaakt door eennietaan het lichaam van de mensaangepaste worm". *Ned. T. Geneesk.*, 104, 422-427.
4. Orr, I. M., Miller, A. A., and Russell, J. Y. W. (1954). Eosinophilic infiltration of the stomach and bowel. *Postgrad. med. J.*, 30, 485-493.
5. Ferrier, T., and Daves, N. (1957). Eosinophilic infiltration of stomach and small intestine. *Med. J. Aust.*, 1, 789-791.17
6. Fennel, E. A. (1952). Eosinophilic linitis plastica. *Proc. Staff Meet. Straub Clin. (Honolulu)*, 18, 69-78.
7. McCune, W. S., Gusack, M., and Newman, W. (1955). Eosinophilic gastroduodenitis with pyloric obstruction. *Ann. Surg.*, 142,510-518.
8. Polayes, S. H., and Krieger, J. L. (1950). Eosinophilic granuloma of the jejunum. *J. Amer. med. Ass.*, 143, 549-551.
9. Virshup, M., and Mandelberg, A. (1954). Eosinophilic granuloma of the gastro-intestinal tract. *Ann. Surg.*, 139, 236-240.

10. Herrera, J. M., and de la Guardia, J. (1948). Unrarocaso de eosinofiliagastro-intestinal motivadora de un cuadroorganico deestenosispilorica. Arch. Hosp. (Santo Tomas), 3, 19-34.
11. Spencer, J. R., Comfort, M. W., and Dahlin, D. C. (1950). Eosinophilic infiltration of the stomach and bowel associated with pyloric obstruction and recurrent eosinophilia. Gastroenterology, 15, 505-513.
12. Booher, R. J., and Grant, R. N. (1951). Eosinophilic granuloma of the stomach and small intestine. Surgery, 30, 388-397.
13. Rigler, L. G., Blank, L., and Hebbel, R. (1956). Granuloma with eosinophils: benign inflammatory polyps of the stomach. Radiology, 66, 169-176.
14. Smith, M. J. (1956). Gastric granuloma with eosinophilic infiltration. Radiology, 66, 177-180.
15. Toole, H. J., and Moschopoulos, A. N. (1959). Eosinophilic granuloma of the gastro-intestinal tract: report of two cases. Brit. J. Surg., 46, 445-448.
16. B. M. Yan and E. A. Shaffer,(2009) "Primary eosinophilic disorders of the gastrointestinal tract," Gut, vol. 58, no. 5,pp. 721-732, 2009.
17. Moloney, G. E. (1949). Pyloric hypertrophy with eosinophil infiltration. Lancet, 1, 412.
18. Doniach, I., and McKeown, K. C. (1951). A case of eosinophilic gastritis. Brit. J. Surg., 39, 247-250.
19. Kaijser, R. (1937). Zur Kenntnis der allergischen Affektionen des Verdauungskanalsvom Standpunkt des chirurgenaus. Langenbecks Arch. klin. Chir., 188, 36-64.

How to cite this article: Rao BAR, Shalini J, Kumar PS. Eosinophilic granuloma of jejunum. Int J Health Sci Res. 2018; 8(3):287-290.
