

A Rare Case Report of Gastric Outlet Obstruction Due to Eosinophilic Enteritis in Duodenum Along with Cholelithiasis

Yeshwant. R. Lamture¹, Varsha P. Gajbhiye², Ranjit Ambad³, Shivansh Sisodia⁴ and Md. Jawed Akther⁵

¹Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

²Department of Pharmacology, Datta Meghe Medical College Nagpur. Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

³Department of Biochemistry, Datta Meghe Medical College Nagpur. Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

⁴Department of Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

⁵Department of General Surgery, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Wardha, Maharashtra, India

Corresponding author email: yash18671@gmail.com

ABSTRACT

Eosinophilic gastroenteritis (EGE) is a not common inflammatory disorder of benign aetiology attacks mainly the stomach and the small bowel. As per Klein's classification it has into three types. One is mucosal and others are muscular and serosal. Steroid is the game changer in the treatment of EGE represents another area of debate. EGE is a chronic inflammatory disorder of GI tract, can present as many GI diseases. Its diagnosis is difficult and may need multiple investigation like imaging, endoscopy and histopathological correlation with clinical diagnosis. As per disease severity and mode of clinical features treatment needed. Most the patient needs non-operative treatment including short course of steroids and judicious use of surgery. Clinical presentation is usually not typical as it depends on part and layer of bowel affected. Main clinical feature nonspecific, commonest is pain in abdomen. Intestinal obstruction is a rare presentation. Gastric outlet obstruction due benign diseases is rare and due to EGE is very rare. Present case is a very rare presentation of EGE as gastric outlet obstruction. Aim behind reporting this case is sensitize clinician about this rare disease phenomenon and occasional need of surgery in resistant and recurrent cases contrary to common practice of conservative treatment for EGE.

KEY WORDS: EOSINOPHILIC GASTROENTERITIS, ABDOMINAL PAIN, STEROIDS, GASTRIC BYPASS.

INTRODUCTION

Eosinophilic gastroenteritis (EGE) is a not common inflammatory disorder of benign aetiology attacks mainly

the stomach and the small bowel. Kajiser was credited to report the first patient in 1937. Till date around 300 cases described in the medical literature (Antoine Abou Rached et al., 2016). As per Klein's classification it has three types. One is mucosal and others are muscular and serosal. Steroid is the game changer in the treatment of EGE. It is a uncommon cause of abdominal pain but the pathophysiology is not understood. Eosinophilic infiltration of affected part of bowel is a typical feature of it (Avinash Rinait et al.,). It can affect any part of the gastrointestinal (GI) tract. Majority of eosinophils are mainly present in tissue only minority seen in the blood. Store house of it is in bone marrow and others present

Biosc Biotech Res Comm P-ISSN: 0974-6455 E-ISSN: 2321-4007



Identifiers and Pagination

Year: 2021 Vol: 14 No (7) Special Issue

Pages: 95-98

This is an open access article under Creative

Commons License Attribution 4.0 Intl (CC-BY).

DOI: <http://dx.doi.org/10.21786/bbrc/14.7.23>

Article Information

Received: 18th April 2021

Accepted after revision: 05th June 2021

in lining epithelium of GI tract where help body to fight against parasites (Lamtore Y.R et al., 2020).

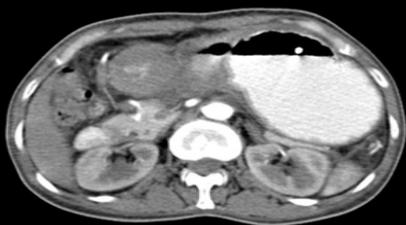
Clinical presentation is usually not typical as it depends on part and layer of bowel affected. Main clinical feature nonspecific, commonest is pain in abdomen. Intestinal obstruction is a rare presentation. Gastric outlet obstruction due benign diseases is rare and due to EGE is very rare (Shana Kothari et al., 2020). Present case is a very rare presentation of EGE as gastric outlet obstruction. Aim behind reporting this case is to sensitize clinician about this rare disease phenomenon and occasional need of surgery in resistant and recurrent cases contrary to common practice of conservative treatment for EGE.

Patient and observation: A middle-aged woman of age 52-year-old admitted with clinical presentation suggestive of gastric outlet obstruction. She had no chronic illness (like diabetes mellitus, hypertension, bronchial asthma, tuberculosis) or any previous surgery of concern or any addictions. She had no significant family history too. She had reduced appetite, with otherwise normal bowel and bladder movements. Examination of respiratory, cardiovascular & central nervous system of the patient was unremarkable. On examination of abdomen and pelvis, patient had tenderness in epigastrium with no obvious distension/rigidity/guarding.

(Figure 1: endoscopic view of severe narrowing at first part of duodenum)



Figure 2 : Contrast CT imaging showing severe narrowing at the level of pyloric-duodenal junction and first part of duodenum causing Gastric Outlet Obstruction



Patient was admitted under department of surgery and all routine laboratory investigations were sent as a part of pre-operative initial workup. It revealed Severe anemia (6.3 gm%), high platelet count (8.7 lakhs/mm³). Hence adequate blood transfusions were given to optimize the haemoglobin levels. Blood tumour markers (CA 19.9 & CEA) were sent which came to be within normal limits. On 2nd day of admission upper Gastrointestinal endoscopy of the patient was done revealing severe narrowing in the first part of duodenum (duodenal stricture) which could be probably inflammatory or malignant (See Fig No.1). for getting definitive diagnosis biopsy was taken from the narrowing site and sent for histopathological analysis.

Figure 3 A and B: microscopic appearance of tissue biopsy taken from duodenal narrowing suggestive of eosinophilic enteritis

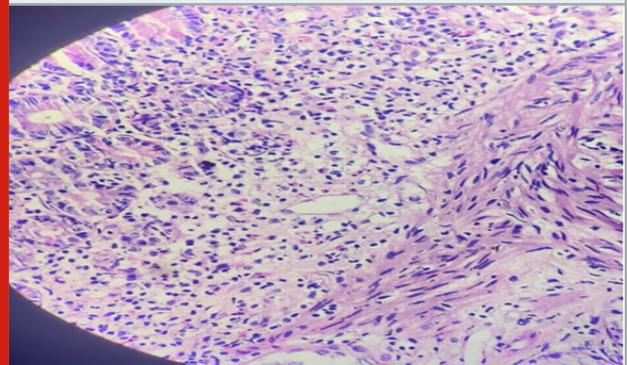


Figure 3A

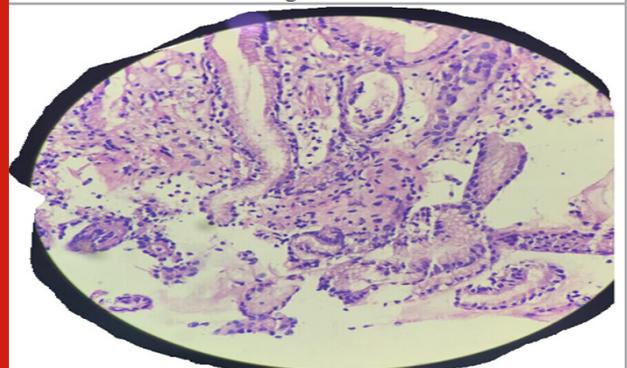


Figure 3 B

On 3rd day of admission, imaging, a contrast enhanced computed tomography (CECT) of pelvis and abdomen was done which revealed circumferential luminal wall thickening in pyloric duodenal junction and first part of duodenum causing partial Gastric Outlet Obstruction (See Fig No.2) along with Cholelithiasis. On 4th day of admission, histopathology reporting of biopsy taken from narrowed segment of duodenum revealed infiltration eosinophils. (See Fig No.3 A and B) On 6th day of admission, patient underwent Gastrojejunostomy with cholecystectomy under general anesthesia. Post-operatively patient got relieved from symptoms and was able to take oral feeds easily without any events of

vomiting or abdominal pain. Henceforth, patient was discharged after complete suture removal from surgical site on 10th post-operative day.

DISCUSSION

Eosinophilic gastrointestinal diseases (EGIDs) are number of diseases depending upon part of GI tract affected. Treatment typically includes systemic corticosteroid therapy, which suppresses cytokine gene transcription and local inflammation. Many case studies have shown sodium cromoglycate and leukotriene inhibitors to be effective with possible role for targeted immunotherapeutic treatments in the future. The duration of treatment remains controversial. However, a long-term follow-up is required because recurrent symptoms commonly develop with this case report, we have gathered multiple evidences that justifies the uniqueness of the disease entity. Our patient came with complaints off upper abdominal pain and vomiting with no blood stained or bile contents and with various investigations, such as upper GI endoscopy and CT scan, we suspected gastric outlet obstruction and to identify the cause we had done biopsy. The histopathological report had confirmed our diagnosis of gastric outlet obstruction due to eosinophilic enteritis . One key point that makes our case unique is the fact that although EGID is more common in males, our patient is a female in her mid-50s with no history of significance in family or any previous history suggesting the cause of gastric outlet obstruction (GOO)which makes it rare to be found in woman as in this case (Shana Kothari 2020 & Lamture Y.R 2020).

Shana Kothari, and Imad Elkhatib describes case of GOO of age around 50. Her imaging and endoscopy revealed GOO secondary duodenal oedema with obliteration lumen. Histopathological examination confirms the diagnosis. This case was similar to present case but treated with steroids.

(Kellermayer R et al) report a boy with gastric outlet obstruction due eosinophilic infiltration who treated conservatory with short course of steroid. but in many cases disease runs a very long course with combination of remission and recurrences and few cases surgical intervention may require like in a present case. Kellermayer R et al concluded to use steroid therapy in any case of EGE before embarking on surgery. Virshup M, Mandelberg A6 [6]report first case of ileal eosinophilic granuloma and patient was presented with weight loss and lump in abdomen . he was operated for exploratory laparotomy found have small bowel adhesions with stricture involving ileum ,caecum and ascending colon hence affected part was resected.

(Sheikh RA et al) report five rare case series of five patients of EGE along with gastric outlet and duodenal obstruction. Four patients does not required surgery they treated with conservative therapy. only one had needed surgery as he presented with recurrent GOO with medical treatment. Last one was similar to present case. Chao HC in review he was against both minimal or open

bypass surgery as he states that gastric out let obstruction (GOO) secondary to EGE a steroid act in a major role and he observed many cases of recurrences even after surgical procedure or balloon dilation if the underlying inflammatory process is not treated adequately.

As per review of (Sunkara et al) surgery is not first line option to treat EGE. This modality should consider as last measure to treat complicated EGE. Even with these guidelines it is not possible to avoid surgery in major number of affected individuals. It is unfortunate that around 40% required surgical intervention and about not less than 50% out of surgical treated patient land in recurrence. A number of studies on related issues were reviewed (Morey 2020 & Agrawal 2010). Related studies have also been reported in Global burden of disease studies (James 2020 & Vos 2017).

CONCLUSION

EGE is a chronic inflammatory disorder of GI tract ,can present as many GI diseases. Its diagnosis is difficult and may need multiple investigation like imaging ,endoscopy and histopathological correlation with clinical diagnosis. As per disease severity and mode of clinical features treatment needed .most the patient needs non operative treatment including short course of steroids and judicious use of surgery in recurrent cases of luminal obstruction on medical therapy.

REFERENCES

- Agrawal, Amit, And M. K. Chauhan (March 2010). Prolapse Of The Small Intestine Through The Peritoneal Opening - An Unusual Cause Of Post-Shunt Intestinal Obstruction." *South African Journal Of Child Health* 4, No. 1: 22-23.
- Ambad, Ranjit S., Priya Koundal, Akansha Singh, And Roshan Kumar Jha (September 21, 2020). Association Between Glutathione-S-Transferase And Gastric Carcinoma: A Case Control Study." *Journal Of Evolution Of Medical And Dental Sciences-Jemds* 9, No. 38: 2783-86. <https://doi.org/10.14260/Jemds/2020/606>.
- Antoine Abou Rached, Weam El Haj (2016 November). Eosinophilic Gastroenteritis: Approach To Diagnosis And Management. *World J Gastrointest Pharmacol Ther*; 6; 7(4): 513-523
- Avinash Rinait, Lamture Y.R., P. Prateek, Dilip Gode, Surgery For Gastric Adenocarcinoma With Hospital Stay-A Prospective Study, *Indian Journal Of Forensic Medicine & Toxicology*, October-December 2020, 14(4),6211-6216.
- Chao Hc. Update On Endoscopic Management Of Gastric Outlet Obstruction In Children. *World J Gastrointest Endosc* 2016; 8(18):635-645 Available From: [Doi: 10.4292/Wjgpt.V7.I4.513](https://doi.org/10.4292/Wjgpt.V7.I4.513)
[Doi: Http://Dx.Doi.Org/10.4253/Wjge.V8.I18.635](http://dx.doi.org/10.4253/Wjge.V8.I18.635)
[Doi:10.14309/Crj.0000000000000344](https://doi.org/10.14309/Crj.0000000000000344)
[Doi:10.3748/Wjg.15.2156](https://doi.org/10.3748/Wjg.15.2156)
- Gupta, Gaurav, Sachin Kumar, Sangeeta Gupta, K.

- B. Golhar, And Swapnil Deshpande (August 2014). Neonatal Gastric Perforations: Are They Really Spontaneous?" *Indian Journal Of Surgery* 76, No. 4: 319–20. <https://doi.org/10.1007/S12262-013-0980-7>.
- James, Spencer L, Chris D Castle, Zachary V Dingels, Jack T Fox, Erin B Hamilton, Zichen Liu, Nicholas L S Roberts, et al (October 2020). Global Injury Morbidity And Mortality From 1990 To 2017: Results From The Global Burden Of Disease Study 2017." *Injury Prevention* 26, No. Supp 1: 196–114. <https://doi.org/10.1136/Injuryprev-2019-043494>.
- Kellermayer R, Tatevian N, Klish W, Shulman RJ (2008). Steroid Responsive Eosinophilic Gastric Outlet Obstruction In A Child. *World J Gastroenterol*;14(14):2270-2271. [Doi:10.3748/Wjg.14.2270](https://doi.org/10.3748/Wjg.14.2270)
- Lamtore Y.R. Dr. Thavendra Jaglal Dihare, Dr. Varsha Gajbhiye, Gode Dilip 2020. Triple Drug Therapy With Proton Pump Inhibitor A Better Option For Helicobacter Pylori Eradication, *Indian Journal Of Forensic Medicine & Toxicology*, October-December, 14(4),7046-7050.
- Morey, Swapna G., Ranjana Sharma, And Manoj Patil (2020). To Study The Effectiveness Of The Awareness Program On Prevention Of Cholelithiasis In General Population. *International Journal Of Modern Agriculture* 9, No. 3: 1–5.
- Murray, Christopher J L, Cristiana Abbafati, Kaja M Abbas, Mohammad Abbasi, Mohsen Abbasi-Kangevari, Foad Abd-Allah, Mohammad Abdollahi, et al (October 2020). Five Insights From The Global Burden Of Disease Study 2019." *The Lancet* 396, No. 10258: 1135–59. [https://doi.org/10.1016/S0140-6736\(20\)31404-5](https://doi.org/10.1016/S0140-6736(20)31404-5).
- Shana Kothari, And Imad Elkhatib (2020). Eosinophilic Enterocolitis: Gastric Outlet Obstruction. *Acg Case Rep J*;7:E00344.
- Sheikh Ra, Prindiville Tp, Pecha Re, Ruebner Bh (2009). Unusual Presentations Of Eosinophilic Gastroenteritis: Case Series And Review Of Literature. *World J Gastroenterol*;15(17):2156-2161.
- Tagore Sunkara, Prashanth Rawla, Krishna Sowjanya Yarlagadda, Vinaya Gaduputi (2019). Eosinophilic Gastroenteritis: Diagnosis And Clinical Perspectives, *Clinical And Experimental Gastroenterology*:12 239–253. [Url: Http://www.Wjgnet.Com/1948-5190/Full/V8/I18/635.Htm](http://www.wjgnet.com/1948-5190/Full/V8/I18/635.htm)
- Virshup M, Mandelberg A (1954). Eosinophilic Granuloma Of The Gastro-Intestinal Tract; Report Of A Case Involving The Ileum. *Ann Surg*;139(2):236-240. [Doi:10.1097/00000658-195402000-00016](https://doi.org/10.1097/00000658-195402000-00016)
- Vos, Theo, Stephen S Lim, Cristiana Abbafati, Kaja M Abbas, Mohammad Abbasi, Mitra Abbasifard, Mohsen Abbasi-Kangevari, et al (2019). "Global Burden Of 369 Diseases And Injuries In 204 Countries And Territories, 1990–2019: A Systematic Analysis For The Global Burden Of Disease Study. *The Lancet* 396, No. 10258 (October 2020): 1204–22. [https://doi.org/10.1016/S0140-6736\(20\)30925-9](https://doi.org/10.1016/S0140-6736(20)30925-9).
- Wani, Bhushan N., And Suhas Jajoo (April 2010). Gastric Volvulus." *Indian Journal Of Surgery* 72, No. 2: 163–64. <https://doi.org/10.1007/S12262-010-0039-Y>.