

A Rare Presentation of All in One Complications of Peptic Ulcer Disease

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Case Report

A 72 year old male presented with complaints of multiple episodes of vomiting after taking meals since 3 months and an 2 episode of hematemesis 1 day back. There was no history of melaena. Patient was non-alcoholic/non-smoker and a known case of DM and HTN on treatment. History of taking over the counter medications for recurrent upper abdominal pain since few years was present. Patient was thin built. Vitals were normal , except for mild pallor. On abdominal examination there was visible peristalsis from left to right and positive succussion splash on giving test feed.

Investigations revealed anaemia, hypokalemia and hyponatremia for which correction was started. X ray abdomen was normal. Ultrasonography abdomen and portal Doppler study was normal. Patient was then subjected to Upper GI scopy. UGI scopy showed normal oesophagus, dilated stomach; with a prepyloric ulcer over anterior wall of stomach with slough with deformed and pin point pylorus. Scope could not be negotiated beyond the pylorus in the duodenum . Multiple Biopsies were taken from ulcer edges and biopsy was also taken from body of stomach and rapid urease test was positive. CECT abdomen was suggestive of circumferential wall thickening

involving the pylorus of stomach causing near complete luminal narrowing but preserved mural stratification and without any perigastric lymphadenopathy with normal other organs. Histopathology report of the endoscopic biopsy suggested chronic gastritis. We kept the diagnosis of PYLORIC STENOSIS secondary to benign peptic stricture with hematemesis secondary to prepyloric ulcer with H. Pylori positive.

MANAGEMENT- After optimization and with written informed consent of the patient; Surgery was planned. OPEN GASTROJEJUNOSTOMY WITH TOTAL TRUNCAL VAGOTOMY was performed. By taking a upper midline incision abdomen was opened and deformed pylorus was appreciated. There was no e/o perigastric lymphadenopathy and liver was also grossly normal. Total truncal vagotomy was performed and excised portions of anterior and posterior vagi were sent for histopathological examination. A posterior, is peristaltic, retro-colic gastrojejunostomy was performed .Abdominal drain no 32 was kept and abdomen was closed.

Post-operative recovery was uneventfull and he was doing well till 48 hours postoperatively. But on second post-op day he had sudden onset pain in abdomen, with tachycardia of 130/min, tachypnoea with RR of 24/min and

hypotension with blood pressure 80/50 mm hg . Abdominal drain was 50 cc bilious. This raised a few suspicions in our mind which were either ? denovo perforation of anterior gastric wall pre-pyloric ulcer OR ?? Leak from the GJ stoma .With these suspicions decision to immediately re-explore the patient was taken .

SECOND OPERATIVE PROCEDURE- Abdomen was opened through the previous incision .There was approx. 500 cc of bilio-purulent collection which was sucked out .Small bowel was inspected and there was a duodenal perforation in its 1st part over anterior wall of approx. size 1 by 1 cm. Methylene blue leak test was done and integrity of gastrojejunal anastomosis was confirmed. Primary closure of the perforation with omentoplasty was done .Warm NS wash given, abdominal cavity mopped and abdominal drain placed and abdomen closed in layers. Post operative period was uneventful. Patient has recovered well and has been started on H.pylori eradication therapy and prolonged PPI .

Discussion

Peptic ulcer disease (PUD) is a major public health problem and a source of substantial health care expenditure.⁽¹⁾ Overall peptic ulcer mortality and hospitalization rates have decreased and surgical management of PUD has evolved significantly over past 30 years .The discovery of H. pylori and the proven fact that it colonises the gastric mucosa causing gastric and duodenal ulcers and even gastric cancer, has revolutionized the treatment of PUD. At present medical management is directed towards the irradiation of H.pylori using combined drug therapy and prolonged PPI has completely taken over the treatment aspects of PUD. NSAID intake and cigarette smoking are presently the well established factors apart from H. pylori in causation of gastric and duodenal ulcers. These agents also act synergistically to cause PUD. Surgical treatment in PUD is mainly reserved

to manage its complications which include haemorrhage or upper GI bleed, perforation, gastric outlet obstruction .

Complications of PUD

Upper GI bleed or haemorrhage is the most common complication of PUD (15%).⁽³⁾ Upper GI bleed secondary to PUD presently is managed efficiently in > 90 % of cases with endoscopic interventions⁽⁴⁾ which include clipping of bleeding vessel using haemoclip, application of APC probe, thermal coagulation by bipolar probe and injection epinephrine into the ulcer base . Surgical management is reserved mainly in cases of refractory haemorrhage (uncontrolled despite 2 unsuccessful endoscopic interventions), massive haemorrhage leading to shock or cardiovascular instability, prolonged blood loss requiring continuing transfusions and recurrent haemorrhage requiring hospitalization.⁽⁵⁾

Perforation is 2 nd most common complication of PUD (6-7%)⁽³⁾. Perforation in 1 st part of duodenum being the most common site followed by prepyloric region. Perforation secondary to PUD is a surgical emergency and requires nothing but surgical management in the form of closure of perforation and omental patch. Highly selective vagotomy may be combined in few cases with haemodynamic stability. Surgical treatment should be followed by H. pylori eradication and PPI. Despite adequate eradication there lies a 10% life time risk of re-perforation.⁽³⁾

Gastric outlet obstruction secondary to duodenal and pyloric scarring is the 3 rd most common complication of PUD (1-2%)⁽³⁾. It may be acute or chronic obstruction. Acute obstruction may be due to pyloric edema resulting from an acute pyloric or duodenal ulcer and can be managed conservatively. It generally resolves over a period of few days .Chronic obstruction results secondary to duodenal or pyloric scarring and requires either endoscopic or surgical intervention . Endoscopic intervention in the

form of endoscopic balloon dilatation (EBD) may be successful in 80% of patients with patients experiencing immediate resolution of symptoms . But EBD has long term failure rate and nearly 60 % patient experience recurrence of symptoms over a period of 3-4 months.⁽⁶⁾ Surgical management in the form of Gastrojejunostomy provides a definitive and long lasting relief of symptoms . The epidemiology of peptic ulcer has continued to change. The incidence of complicated PUD has declined dramatically. Also, there has been a decline in the number of hospitalizations for complicated PUD & number of surgical interventions. The recent change has been attributed to better medical therapy including the PPI's & regimens for eradication for H.pylori.⁽⁷⁾

Peptic ulcer disease represents most frequent cause of upper gastrointestinal hemorrhage accounting for approximately 40% of all cases.⁽⁸⁾ About 10-15% of patients with PUD develop bleeding at some point in the course of their disease. Mostly bleeding stops spontaneously & requires no intervention, however persistent bleeding is associated with 6-8% mortality.

Peptic perforation is a surgical disease & management means emergent surgical intervention. Sometimes, the perforation may seal spontaneously, however operative intervention is required in almost all cases. Perforation has the highest mortality rate of any complication of PUD, of approx 15%. The epidemiology of bleeding peptic ulcers exactly mirrors that of perforated ulcers. In recent years, the population affected has become much older & complications are commonly associated with ingestion of NSAIDs.

Gastric outlet obstruction from PUD is now less common than obstruction from carcinoma. Thus malignancy must be ruled out with endoscopy. Endoscopic dilatation & H. pylori eradication are mainstays of therapy . However, patients with refractory obstruction are best managed

primarily with antrectomy & reconstruction along with vagotomy.

Conclusion

Our case is unique in the sense that we could see and manage all the 3 complications of Peptic Ulcer Disease during the same period of hospitalization. It is generally seen that patients develop a single complication of PUD. But despite extensive research of literature ,not a single case presenting with all the 3 complications at same time has been reported. H. pylori eradication treatment forms the basic crux of ulcer healing and preventing recurrence. Haemorrhage , perforation and gastric outlet obstruction are the complications of PUD seen in descending order but all may be found in a single patient at the same time very rarely.



Image 1: Prepyloric ulcer over anterior wall of stomach with slough.



Image 2: Intra-operative photograph showing D1 perforation during second surgery.