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Double Gastric Perforation as a Complication of Peptic Ulcer Disease, a Rare Surgical Entity

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Aim: Double gastric perforations are a rare surgical entity and the operating surgeon has to be aware of the possibiity of multiple perforations. Here in we report a case of a 70year old male with double gastric perforation.

Presentation of Case: A 70 year old male patient presented to casuality with complaints of pain abdomen since 3 days and not passing stool and flatus since 2 days. Initial vitals were heart rate 104 beats/min, resp rate 23/min bp 95/65mmhg. Initial resuscitation was done. Chest x-ray and x-ray erect abdomen and pelvis revealed gas under the diaphragm.

Ultrasound abdomen and pelvis revealed- peritoneal collection with air echoes and debris (? Hollow viscous perforation).

Discussion: Patient was taken up for emergency laparotomy and intra op pathology revelaed 2 perforations one in the antrum and one in pylorus of stomach. Biopsy was taken and modified grahams omental patch repair done Patient discharged without any issue and upper GI endoscopy after 6weeks revealed no evidence of malignancy.

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Conclusion: The occurance of multile perforations is rare and should always be kept in mind when encountering a Hollow Viscous Perforation. In emergency setting a quick and a safe surgery has to be carried out with thorough peritoneal toilting followed by postoperative medical management of H. pylori infection.

Keywords: Double gastric perforation; grahams omental patch repair; peptic ulcer disease.

1. INTRODUCTION

Hollow Viscous Perforation is one of the common cause of surgical emergency. Of which perforated peptic ulcer is seen in majority of cases. Patients with perforated peptic ulcer have a hospital mortality risk of 10% to 20%. Most patients with perforated peptic ulcer are adequately treated by peritoneal washout and omental patch, with subsequent elimination of risk factors [1]. Biopsy to rule out cancer should be done in patients with perforated gastric ulcer [1]. Rarely there can be multiple perforations and one must always be aware during the surgery.

2. PRESENTATION OF CASE

A 70 year old male patient came to the casualty with complaints of Pain Abdomen since 3days and not passing stool and flatus since 2days, Associated with Vomitings since 2days and Abdominal Distension. No history of fever, No history of Hematemesis or Black coloured stools. Pt had a history of consuming Native Medications since 3years, not a known case of Diabetes/ Hypertension. No History of similar complaints in the past and this was the first episode of having such complaints. He is a non-smoker and non-alcoholic On Examination Patient was Conscious and Coherent , Pulse rate 104beats/min Respiratory Rate28/ min, BP 95/65mmHg Abdomen was distended, guarding and rigidity were present ,diffuse tenderness, Bowel Sounds were absent. No Growths/Mass ,No ballooning on Digital Rectal Examination Chest Xray and Xray Erect Abdomen showed gas under the diaphragm and Ultrasound Abdomen revealed internal air echos with peritoneal collection and internal debris. Total Leukocyte Count was 11,000cells/mm3, Hb11gm%, platelet count 1.4lakhs, Sr. urea 40mg/dl, Sr. Creatinine 0.9mg/dl, Na-137meq ,K-3.3meq Patient was taken up for an Emergency Laparotomy. IntraOP Findings were around 1000ml of biliopurulent fluid was drained and 2 perforations- One at Antrum of Stomach along the greater curvature of stomach of size around 2.0x1cms borders were regular and induration was present and one at Pylorus of Stomach around 1.5x1cms in size with regular borders and induration were found. The distance between the two perforations was about 3cms and the intervining tissue was normal. The adjancent areas of stomach was found to be normal Fig. 1.

Biopsy was taken and a Modified Grahams Omental patch repair was done for both the perforations and thorough toileting was done, 2 ADK drains one in Morrison space and one in pelvis were given Patient recovered completely, postop period was uneventful and pateint was discharged on post op day7. The biopsy showed inflammatory cells and there was no evidence of malignancy. An Upper GI Endoscopy of this patient after 6weeks revealed antral Gastritis along with healed Peptic Ulcers which were flat along the greater curvature and pylorus of the stomach, the gastric folds were intact margins were smooth, regular and rounded edges. No signs of active bleeding was noted in the ulcer.

Fig. 1. Perforations noted at stomach one at the pylorus of size 1.5x1cms and other 3cms away along the greater curvature at antrum of size 2.0x1cms

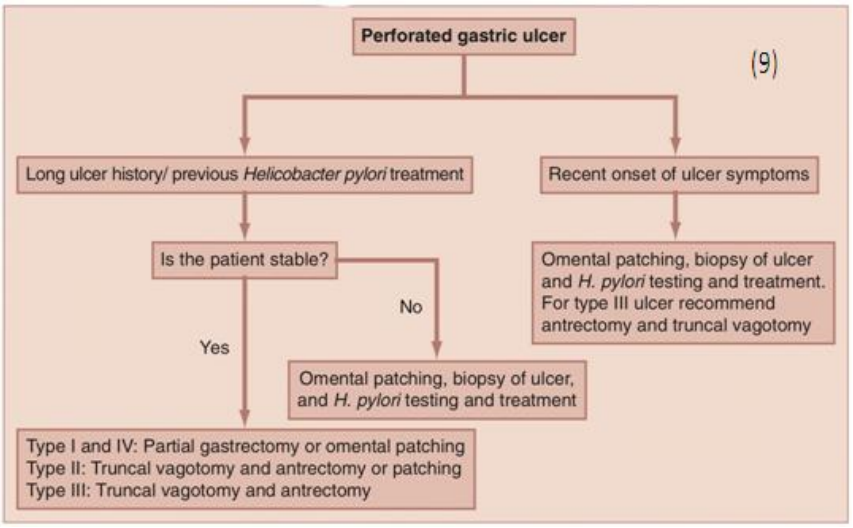

Fig. 2. Recommended treatment algorithm for surgical management of perforated gastric ulcers

3. DISCUSSION

Perforation is the second most common complication of Peptic ulcer with an annual incidence of 11 operations per 100,000 population. Perforations are associated with the highest rate of mortality [2]. The incidence of H. pylori in the setting of gastric ulcers is between 80% and 90% and up to 100% in the setting of duodenal ulcers [3].

Peptic perforation is the most prevalent surgical emergency. With high mortality and morbidity, peptic perforation is most commonly present in the first part of the duodenum (35-65%), with 25-45% located in the pylorus, and 5-25% in the stomach [4]. One of the major difference between a Gastric and a duodenal ulcer is that, the gastric ulcers more commonly harbour malignancy and should be biopsied [5]. Causes of gastric perforation include H. pylori infection, NSAID abuse, Smoking, Stress, Spicy food and Malignancy. The patient had a Boey score of 2 which suggests a Perioperative Morbidity of 75% and Mortality of 33% [6].

Occurance of Multiple perforation is a rare entity of which multiple gastric perforation is further more rare [7]. There are a very few cases that reported of multiple perforations in literature. Our case had perforation one along the Greater Curvature and the other at the pylorus. As it was an emergency and taking patients age and delayed presentation into consideration we performed a Modified Grahams Omental Patch Repair of both the perforations with Biopsy of the perforations and post-operative medical management for eradication H.pylori infection. The biopsy revealed no evidency of malignacy and subsequent UGI Endoscopy after 6weeks showed Antral Gastritis and a healed Ulcer. The patient is doing well and is on regular followup. For peptic perforation, a Graham patch repair, with or without an acid reducing surgery is probably the most appropriate management. It is the easiest, quickest, safest operation, and can be applied to all situations by every surgeon; moreover, it can be complemented later with an effective medical treatment that should include eradication of H. pylori [8].

4. CONCLUSION

The occurance of multile perforations is rare and should always be kept in mind when encountering a Hollow Viscous Perforation. In tropical countries like India H. pylori infection is the commonest cause followed by NSAIDs abuse. In emergency setting a quick and a safe surgery has to be carried out with thorough peritoneal toilting followed by postoperative medical management of H. pylori infection.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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