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## **Case Report**

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# Synchronous gastric and duodenal peptic perforation: a rare case report

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## **ABSTRACT**

Peptic perforation remains a common entity with varied reasons behind its presentation. Although attributed to its high incidence a double blowout one at duodenum and the other at gastric antrum makes it interesting and intriguing as well. Here presenting such a rare entity. A 35 years male presented with severe upper abdominal pain to emergency department of surgery. His pain started 12 hours before reporting to the doctor with one episode of vomiting and low grade fever. On examination patient had tachycardia, tenderness, abdominal distension and rigidity. An X-ray confirmed gas under diaphragm and without further investigations the patient was explored. With proper consent and preanesthetic checkup, an explorative laparotomy was performed. After draining pus and peritoneal contents the vigilant surgeon observed two perforations of size <1 cm at a distance of 7 cm from each other, one gastric (antral) and other in 1st part of duodenum. After peritoneal lavage the perforations were closed with 3 interrupted non absorbable silk suture with grahams patch. Drains were kept and wound closed. Patient was NBM till day 4 post-operative and started orals thereafter. Hospital stay uneventful and patient discharged on day 12. Though rare but a possibility should be kept in minds of all surgeons about such diverse presentation of peptic perforation. With improving medicinal treatments, diseases are also showing a changing trend. So for being a successful surgeon both knowledge and alertness still remains the key.

Keywords: Peptic perforation, Dual perforation, H. pylori

## INTRODUCTION

Peptic perforation is an end stage manifestation of peptic ulcer disease. This disease has gone a shift from its natural history from involving young age group without proper medicinal treatment in the past to older individuals due to advances in the modern era. The most common site is the duodenum followed by the gastric antrum. In a developing country like India H. pylori accounts for total 70% of cases and 90% of this develop in stomach. Newer causes like stress, NSAIDS usage, alcohol etc. have added to the morbidity of this disease. In general the

diagnosis of perforation is done with the help of X-ray and ultrasound and the treatment is mostly surgical explorative laparotomy with primary closure and lavage. Location is easily assessed intraoperatively. As mentioned early about the change in trends multiple simultaneous perforations are being intestinal<sup>2</sup> reported. Simultaneous and colonic<sup>3</sup> perforations have been identified in the past and present and even Zollinger Ellison syndrome causing multiple ulcers with perforation have been widely discussed. But synchronous peptic perforation forms a rarity till date. Our case report is probably the first case from India and

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fourth cases in the world to be published. Describing hence forth this interesting case we dealt at our emergency department.

### **CASE REPORT**

A 35 years old male patient presented with severe upper abdominal pain to emergency department of surgery. His pain started 24 hours before reporting to us, and was sudden onset for which he took an antacid without any relief to only increase with time landing him at emergency department. He had one episode of vomiting consisting of food contents and low grade fever of 99.6°F. On examination patient had tachycardia with pulse 116/min thready and low volume. Tenderness, abdominal distension and rigidity were present. Upper border of liver dullness was obliterated. An X-ray chest PA view and X-ray Abdomen erect was advised which confirmed gas under diaphragm and without further investigations the patient was moved to operation theatre. With proper consent explaining patient about the disease and the operative procedure, patient was posted for emergency surgery. His laboratory investigations showed normal complete blood count except for WBC's which was 15000/mm<sup>3</sup>. His KFT and LFT were within normal limits. After giving patient general anesthesia an exploratory laparotomy was performed. Upper midline incision was given and wound opened layer by layer. Around 2000 ml of peritoneal contamination was sucked out. Two perforation one duodenal size 0.7 by 0.7 cm and other gastric 0.6 by 0.6 cm were identified, separated by a distance of 7 cm from each other. Using non absorbable silk 2.0, perforations closed in 3 interrupted rows. Omental patch was given to both. Thorough peritoneal lavage was given and 2 abdominal drains were kept one in subhepatic space and the other in pelvis. Abdominal wound was closed in layers. Proper wound dressing done under sterile precautions.



Figure 1: Exploratory laparotomy.

Patient was kept NBM till day 4 post-operative and started orals thereafter. Wound check dressing was done on day 4 and was without any soakage. Drains were

removed on day 6. Sutures were removed on day 10. His ultrasonography of abdomen was done prior to discharge and it was normal. Hospital stay was uneventful and patient was discharged on day 12 on anti H. pylori medications only. On follow up after 14 days patient was symptom free and satisfied with the outcome.

## **DISCUSSION**

Hemorrhage In the past several surgeons namely Finney,<sup>4</sup> Aird,<sup>5</sup> Austin<sup>6</sup> and Livingston<sup>7</sup> reported occurrence of multiple perforation retrospectively from autopsy studies. Johnson<sup>8</sup> and Feldman<sup>9</sup> were the first to report concomitant gastric and duodenal ulcer perforations. Feldman<sup>9</sup> collected figures from twenty-five authors, the average percentage for double ulceration being about ten. He believed that the duodenal ulcer occurred first and the gastric ulcer later. Johnson<sup>8</sup> holds similar views and stresses that many have gross pyloric stenosis. He found double ulceration in 9 per cent in his surgical series of 313 patients. George H. Stobie<sup>10</sup> was the first person to report such a case and stated the following "Under ether anesthesia the abdomen was opened through a right upper paramedian incision. Gas, free purulent fluid, and food which contained red cherries were present in the abdomen. On the anterior wall of the duodenum, 11/2 inches below the pylorus, was a large calloused ulcer which was adherent to the undersurface of the liver. A small perforation was present at the margin, through which gas and bile-stained fluid were oozing. This was separated from the liver and closed by sewing an omental graft over it with three sutures of chromic catgut. While aspirating food, cherries, and fluid from the abdomen a large calloused ulcer was found high on the lesser curvature of the stomach, with a hole large enough to admit the little finger. This was where the food and cherries were coming from. It was excised with the cautery and closed with two rows of sutures. The abdomen was closed with a Penrose drain in Morrison's pouch and one between the liver and diaphragm" and on follow up of the patient after 14 years noted no complaints by him.

Powell<sup>11</sup> was the second person to publish a case report his patient with double perforation. His operative findings are as follows "Under general anaesthesia the abdomen was opened by a right upper paramedian incision, revealing gross soiling of the upper quadrant and a small anterior perforation in the first part of the duodenum. From this a fan-shaped area of inflammatory exudate spread down into Morrison's pouch. Immediately distal to the oesophago-gastric junction a firm mass was palpated with a second and larger perforation, from which another and entirely separate area of inflammatory exudate spread distally. So firm was this mass that it was thought to be a gastric carcinoma. The duodenal perforation was closed, but closure of gastric perforation was technically impossible without enlarging the incision extensively and this was considered unjustifiable in view of patients general condition. A high jejunostomy was

therefore performed and a right flank stab drain was led up to the site of gastric perforation. His post-operative course was complicated by repeated epileptic fits which, despite heavy anticonvulsive sedation, ultimately culminated in a condition of status epilepticus. Despite this, his enterostomy feeding worked without difficulty, and for a time his nutritional state improved. He finally succumbed 23 days after operation" And concluded that surgeons should always bear the possibility of more than one perforation. The era since then didn't report such findings.

Dimos Karengelis<sup>12</sup> et al. recently gave their case report of synchronous perforation. They reported a perforated ulcer on the anterior wall of the duodenum and another on posterior pre-pyloric ulcer on the lesser curvature of the stomach, perforated into the lesser sac and performed primary suturing of both the ulcers concluded the same as others. Our case report also follows on the same footsteps of the others mentioned above. The only contrasting finding of our study with that of others is the fact that we found perforations both on anterior aspect. Rest all the findings and treatment are in general based on the same principles.

### **CONCLUSION**

We conclude that though rare, a possibility should be kept in minds of all surgeons about such diverse presentation of peptic perforation. With improving medicinal advances, diseases are also showing a changing trend and myriad presentations. Hence for being a successful surgeon both knowledge and alertness still remains the key.

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