Author's response to reviews

Title: Perforated peptic duodenal ulcer in a paraesophageal hernia - a case report of a rare surgical emergency

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Author's response to reviews: see over
Thank you for providing us with the peer-review comments. We have carefully addressed all of the points that have been raised, and provided changes and comments accordingly. We hope the revised version of the paper is considered suitable for publication.

Yours sincerely,
Mikael Ekelund

Dr. Wing Tai T Siu

• Background
  o Should consider reciting second paragraph to discussion section.

The 2nd paragraph contains information about etiology and incidence of paraesophageal hernias and is informative to the reader as background information.

o The statement on the 3rd sentence of 3rd paragraph (page 3, lines 20-21) should be re-phrase or re-written.
  This sentence has been changed according to the reviewer

• Case presentation
  o Clinical findings on presentation, post-operative management and clinical course of the patient should be concisely written.
  This section has been shortened

  o Paraesophageal hernia is characterized by herniation of gastric fundus alongside the distal esophagus through the hiatus, while the gastroesophageal junction remains in a reasonably normal position. Large paraesophageal hernia may associate with organoaxial volvulus of stomach that could lead to an “up-side down stomach” and intrathoracic herniation of transverse colon. Could the authors clarify the operative / radiological findings for the evidence gastric volvulus.

Dr. Siu points out the frequently noticed volvulus in the case of outlet obstruction in paraesophageal hernias. This was in part found in the reported case. As described, the cardia was found in the normal intra-abdominal position while the distal stomach and proximal duodenum had twisted approximately 45 degrees resulting in the anterior part of the distal stomach/proximal duodenum facing orally. This might be suggested in figure 2 showing the twisted naso-jejunal-tube-route.

  o Size of the duodenal perforated should be mentioned. (page 5, line 21)
  The size of 6 mm has been added

  o Why prolene is chosen for repair of duodenal perforation, as most surgeons favor repair with absorbable sutures. (page 5, line 22)
  We agree that most surgeons favor absorbable sutures for the repair of a duodenal perforation. In this case the non-absorbable suture Prolene was used due to uncertain healing conditions in a very old patient with many concomitant deceases.

  o Presumably the spleen was inadvertently damaged at the time of operation (page 5, line 24). Was it related to stretching the ligaments and vessels of the paraesophageal herniation? The vessels to the spleen were undoubtfully stretched and the stretch might have contributed to the inadvertently damaged spleen.

  o Full course of potent antibiotic and high-dose proton pump inhibitor infusion are generally not recommended for prophylaxis. (page 6, lines 9-11)
  In the case of an intra-thoracic hernia and perforated duodenum with spillage of duodenal content in an old and medically very ill patient we regard prolonged prophylaxis with antibiotics to be correct. According to the generally accepted regimen of proton pump inhibition in the case
complicated ulcer disease we chose to set the patient on high-dose proton pump inhibition. Since it was a duodenal peptic ulcer the patient was also HP-eradicated.

• Conclusion
- The section should rephrase as “Discussion”

Done
- The description on the mode of presentation, pros and cons of elective repair of asymptomatic paraesophageal hernia is informative to reader. However, the author should also mention that there is no dispute for operative management of the present case with evidence of gastric outlet obstruction and epigastric pain.

This has been added
- Controversy somehow exists in the selection of best approach for elective repair of paraesophageal hernia. Laparoscopic paraesophageal hernia repair has been shown to be feasible, while long-term results have to be demonstrated to establish its definitive role.

We agree but we consider this to be a too complex area to comment on in this case report.
- Other controversies worth mentioning are the pros and cons of the use of prosthetic mesh repair and the role of routine prophylactic fundoplication and gastropexy.

We agree but we consider this to be a too complex area to comment on in this case report.
- The peculiarity of concomitant perforated duodenal ulcer of the current patient may be related to this background history of bleeding gastric ulcer. The tight incarceration of the stomach and transverse colon might have prevented gas and fluid content from leading from the ulcer perforation.

We agree that the history of a former upper GI-bleeding may be related to the cause of the perforation. We also agree that the ulcer in part was covered – but the presentation was very sudden and the coverage must thereby have been incomplete.

Discretionary Revisions (which the author can choose to ignore)
Figure 2 and 1 picture in Figure 3 could be omitted
"Figure 2 may help the reader to understand the route of the distal stomach and duodenum. It also describes why obstruction is a problem in the case of a paraesophageal hernia. Fig. 3 has been modified."

Dr. David I Watson
The concluding sentence of the abstract is somewhat misleading – this problem (as admitted in the discussion) had been described before. The authors only claim to a “first” is that their patients survived. The conclusion should be reworded accordingly.

The conclusion has been changed
The case presentation is too long, and it contains a lot of information which is not relevant to the message of the paper. It should be shortened by 50%.

The case presentation has been shortened
The authors decision to open into the right pleural cavity does not make sense. Satisfactory mediastinal drainage can be achieved by placing drains via the reconstructed oesophageal hiatus. Once the pleura is opened, the pleural cavity is contaminated and any GIT leakage will tend to collect in this cavity. Hence, it doesn’t make good sense to open the right pleura, solely for the purpose of mediastinal drainage when the abdominal route will achieve this. The alternative should be acknowledged and discussed.

The reason for choosing to open the right pleural space is now explained in the text at the end of “Discussion”
Figure 3 is unclear. It does not add to the case report, and could easily be deleted.

Figure 3 has been changed for better clarity.