Laparoscopic Closure of Peptic Duodenal Ulcer Perforation in a Patient With Child A Cirrhosis & Perforation Peritonitis: Lessons from Management of a Rare Case.

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INTRODUCTION

- Life-saving procedures in cases like perforation peritonitis have to be performed even during the present COVID pandemic by adapting appropriate safety measures.
- Here we report a rare case of laparoscopic closure of duodenal perforation in a Child A cirrhosis patient.

CASE DESCRIPTION

Clinical Presentation

A 55-year-old male with a history of chronic alcoholism & smoking for the past 40 years presented with severe upper abdominal pain. He is a known case of Child A cirrhosis (Child score 6) with portal hypertension.

Investigations

- On physical examination, tachycardia, & peritoneal signs were present. Encephalopathy & coagulopathy were absent.
- On X-ray imaging, Pneumoperitoneum was diagnosed. There were no radiological features of COVID-19 on X-ray imaging

Management

COVID-19 related management

- Nasopharyngeal swab sent for COVID testing but considering patient's condition, after preoperative resuscitation, he was posted for emergency diagnostic laparoscopy.

Surgical management

- General anaesthesia was administered as per the Indian Society of Anaesthesiologists National Advisory & Position Statement regarding COVID-19[1].

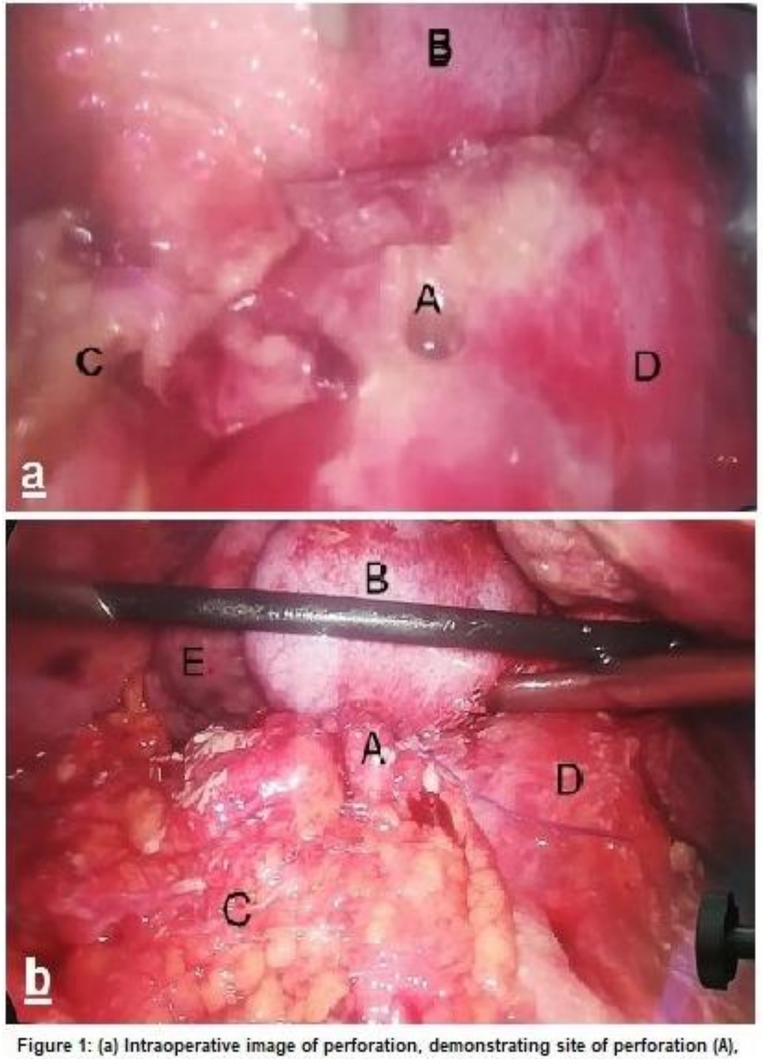


Figure 1: (a) Intraoperative image of perforation, demonstrating site of perforation (A), gallbladder (B), hepatic flexure (C), and duodenum (D). (b) Intraoperative image after perforation closure, showing omental patch over perforation (A), gallbladder (B), omentum (C), duodenum (D), liver (E).

- Diagnostic laparoscopy revealed an 8mm perforation over the anterior duodenal wall: Two litres of contaminated fluid with pus flakes & associated nodular cirrhotic liver.
- Laparoscopic closure of the perforation was done using modified Graham's Patch repair using vicryl 3-0. 24 Fr drain placed in subhepatic space. Pneumoperitoneum was then evacuated via HEPA filter into a sodium hypochlorite jar.
- Operating time was 110 min & the total blood loss was 200ml.

Postoperative Care

- On POD 2, he had a deranged coagulation profile, & thrombocytopenia, which was managed conservatively. COVID reports turned out to be negative.
- He was started on full oral liquids from day 3 & full diet from day 4. Drain was removed on day 5, & the patient was discharged on day 6. On subsequent visits, the patient was asymptomatic.

DISCUSSION

- Acute abdominal surgery in cirrhotic patients during the present pandemic is a necessary evil.
- Intraoperative bleeding, postoperative sepsis with the potential of multiple organ failure are the main reasons for poor results.
- Laparoscopic perforation closure is a standard care of practice for perforated peptic ulcers with benefits of minimal access surgery[2].
- Laparoscopy with smoke evacuator systems & decent precautions will also reduce the risk of COVID exposure.
- Here, the authors would like to highlight that the laparoscopic approach is safe & feasible in carefully selected cirrhotic patients with duodenal perforation even during the current COVID pandemic when handled with appropriate safety precautions.

REFERENCES

1. Malhotra N, Joshi M, Datta R, Bajwa SJ, Mehdiratta L. Indian society of anaesthesiologists (ISA national) advisory and position statement regarding COVID-19. Indian J Anaesth 2020; 64:259-63
2. Gentileschi P, Rossi P, Manzelli A, Lirosi F, Susanna F, Stolfi VM, Spina C, Gaspari AL. Laparoscopic suture repair of a perforated gastric ulcer in a severely cirrhotic patient with portal hypertension: first case report. JSLS: Journal of the Society of Laparoendoscopic Surgeons. 2003 Oct;7(4):377.