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Case Report

Extended open transgastric necrosectomy in infected necrosis of pancreas using linear staplers

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Abstract

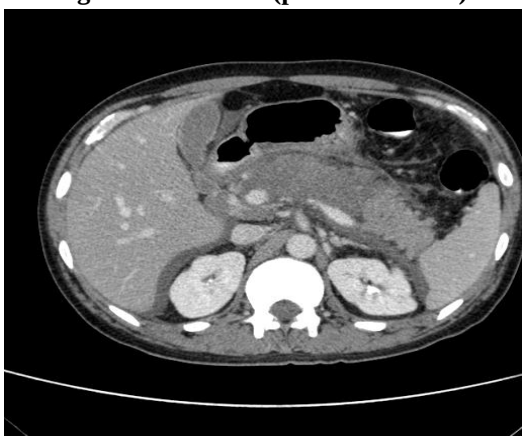
Necrosis of pancreatic parenchyma or peripancreatic tissue is termed necrotizing pancreatitis. Solid necrosis gradually liquefies and becomes surrounded by a capsule after 4weeks and is termed walled off necrosis. 20% of patients with acute pancreatitis develop and of this 25-70% develop infected necrosis. Mortality by infected necrosis is 10-25%. Treatment of infected necrosis involves necrosectomy. Here we report 5 cases of pancreatic necrosis that underwent Extended Open Transgastric Necrosectomy (EOTN) using linear staplers for anastomosis between posterior wall of stomach and pancreas. All the patients recovered well from surgery and there was no mortality, and no complications such as fistula or abscess.

Keywords: Necrosis, pancreatic parenchyma, peripancreatic tissue

1. Introduction

In the majority of cases, AP comprises clinically a mild transitory form of edematous-interstitial inflammation, which is self-limiting and resolves spontaneously. However, 15%–20% of patients with AP will develop the more severe form of the disease[1]. It is accepted that SNP with proven infected necrosis as well as septic complications directly caused by pancreatic infection are strong indications for surgical management. Diagnosis of infected PN can be established by direct CT evidence of retroperitoneal gas or positive cultures of necrotic fine needle aspirates (FNA). FNA for bacteriology represents a well established method for the identification of infected PN and is indicated in patients with CT-proven necrosis (figure 1) and clinical signs of sepsis. Whenever possible, intervention is postponed until the necrosis is demarcated. Demarcation facilitates necrosectomy and reduces complications related to the drainage and debridement procedures[3]. EOTN can be a routine procedure for the pancreatic necrosectomy with less morbidity and mortality.

Figure 1: CT-Scan (proven necrosis)



2. Methods

Five patients who underwent EOTN for necrotizing pancreatitis from may 2014 to dec2014 in shri b m patil medical college.

2.1 Technique

The anterior gastric wall is opened opposite the proposed opening in the posterior gastric wall. Electrocautry is used to make a transverse incision in combined wall along the transverse axis of stomach (figure 2).

The necrosed pancreas is carefully debrided. Hemostasis is achieved. The pancreatic capsule with the posterior wall of the stomach are linearly stapled along the line of closure to ensure apposition and seal of the gastric and pancreatic walls[4]. (Figure 3,4) A large bored nasogastric ryele's tube is placed into the cavity created following debridement to irrigate in the postoperative period.

Figure 2: Transverse incision in combined wall

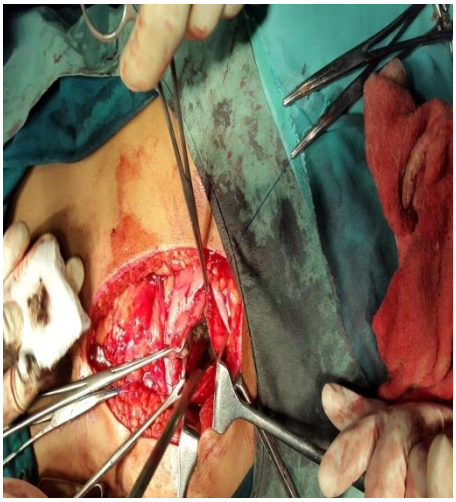


Figure 3: Pancreatic capsule with the posterior wall of the stomach are linearly stapled

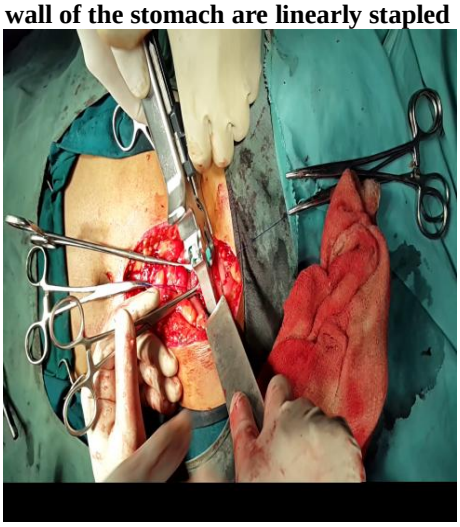


Figure 4: Pancreatic capsule with the posterior wall of the stomach are linearly stapled

3. Results

All the patients tolerated the procedure well. There was no mortality, unlike other approaches the patients did not develop any complications like fistula, abscess.

4. Discussion

The current options include transperitoneal necrosectomy with multiple tube drainages, endoscopic transgastricnecrosectomy, CT guided percutaneous retroperitoneal drainage. Open necrosectomy through the gastrocolic ligament into the lesser sac with multiple tube drainage is the traditional treatment which was commonly used. But it has high mortality and morbidity rates. The primary advantage of transgastric drainage compared with open, laparoscopic debridement or retroperitoneal debridements, which all utilize external drainage, is the reduction in the pancreatic fistula rate which can be associated with significant morbidity and mortality[5].

5. Conclusion

EOTN is a simple procedure which can be performed in all general surgery centres. It has all the advantages of endoscopic necrosectomy as the toxic fluid and the pancreatic secretions are diverted into stomach instead of general peritoneal cavity and hence the morbidity and mortality are less when compared to other open surgical techniques. The other advantage of EOTN is, it gives direct full length visualisation of the necrosed pancreas for debridement.

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