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Case Report
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A Case of Multivisceral Resection for Suicidal Caustic Ingestion Complicated by the COVID Pandemic

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Keywords

Caustic injury; COVID; Pancreaticoduodenectomy; Postpancreatectomy hemorrhage; Zarger grading

Introduction

Ingestion of caustic material accidental or intentional is a medical emergency, in some cases surgical emergency. Even with immediate supportive care, the sequela can be devastating, especially in those presenting late, accompanied with ingestion of large amounts. A high index of suspicion is needed in cases where patients present late with abdominal signs of guarding and rigidity. We report a rare occurrence of extensive necrosis of the stomach till jejunum in corrosive ingestion.

Case Presentation

A 30-year-old woman presented to the emergency department of All India Institute of Medical Sciences approximately six hours after accidental ingestion of toilet cleaner. She had no past medical history of suicidal attempts, anxiety, or depression.

On initial examination, her lips and oral cavity had corrosive marks. She complained of burning sensation in her throat, chest, and abdomen. She gradually developed hoarseness of voice over the next 4 h. She also had gradually worsening shortness of breath with stridor. She was tachycardic, tachypneic but normotensive. She had diffuse tenderness over her abdomen with localized guarding in the epigastric region.

Fiberoptic laryngoscopy revealed edematous epiglottis with bilateral mobile true vocal cords. She was phonating well; however had excessive pooling of saliva. She was electively intubated because of a threatened airway.

Esophagogastroduodenoscopy performed within 12 h of the initial presentation showed diffuse mucosal edema of esophagus, slough with necrosis. Stomach was necrotic with patchy ulceration. Corrosive injury - esophageal Zarger 3b, Stomach Zarger 3a [1]. CECT abdomen with intravenous contrast was done to delineate the extent of injury, which showed loss of uptake in the stomach, D1, D2, D3 with some patchy non-uptake in the proximal jejunum (Figure 1).

Based on the endoscopic and imaging findings, an emergency laparotomy was planned.

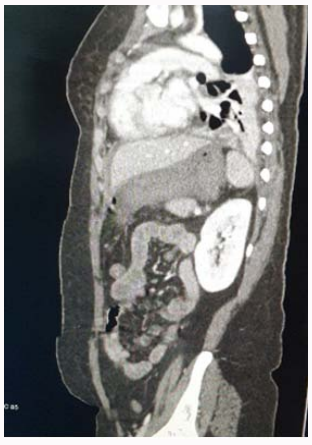

Figure 1: CECT abdomen with loss of uptake in stomach and duodenum.

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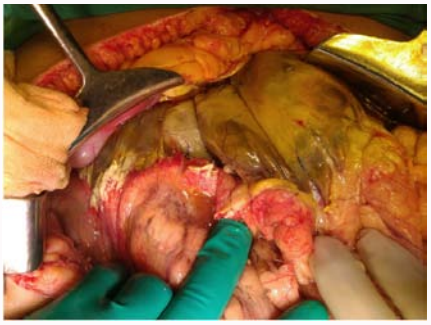

Figure 2: Intraoperative picture showing extensive necrosis of stomach, with patchy involvement of greater omentum.

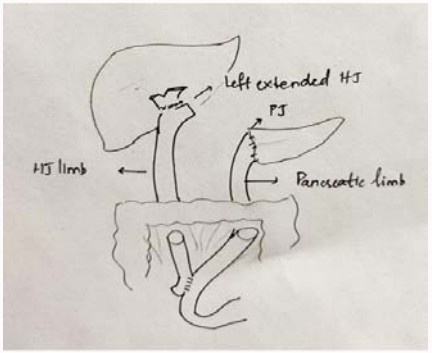

Figure 3: Image of reconstruction – Left extended hepaticojejunostomy, end to end pancreaticojejunostomy. Both the jejunal limbs brought out in retrocolic fashion.

Intraoperatively, the entire stomach, duodenum, proximal 15 cm of jejunum were found to be necrotic with patchy involvement of gall bladder, distal CBD, greater and lesser omentum as well (Figure 2).

Total gastrectomy with pancreaticoduodenectomy was done. Pancreatic duct could not be visualized hence dunkin procedure was done and reinforced with fibrin glue. Left extended hepaticojejunostomy for biliary drainage was done (Figure 3, 4). Witzel feeding jejunostomy was done 30cm distal to jejunojejunostomy. Left cervical end esophagostomy was done. Esophagectomy was not done as the patient was not hemodynamically stable.

Postoperatively, she was in ICU care for 4 days. She was extubated on Postoperative Day (POD) 4 and was shifted to the surgical ward. She had a prolonged postoperative course. She had high drain output with drain amylase measuring more than 3 times the serum amylase. She developed burst abdomen on POD10 with dislodgment of Feeding Jejunostomy tube (FJ). Intraoperatively, FJ tube was found to be lying freely in the abdomen, leak was noted from the pancreaticojejunostomy site, anastomosis was reinforced with vicryl and fibrin glue. Witzel feeding jejunostomy was redone. Following re-exploration, she developed high output uncontrolled biliary fistula from subhepatic drain and midline wound. She was tested COVID positive on POD32 and was shifted to a designated COVID centre. She later developed grade B post-pancreatic hemorrhage. She received multiple blood transfusions. CT angiography however could not localize the bleed site. Her general condition deteriorated and died in COVID centre due to acute respiratory distress syndrome.

Discussion

The COVID pandemic has resulted in an increasing incidence

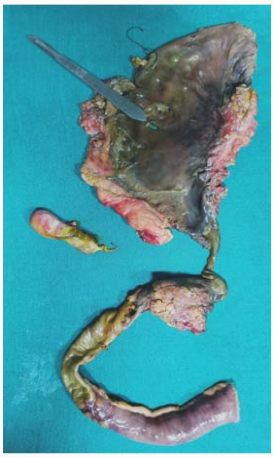

Figure 4: Resected specimen of gastrectomy with pancreatiocoduodenectomy. Gall bladder shows areas of necrosis.

of suicides world over, owing to the fear of infection, isolation, unemployment, financial crisis, stress, and mass panic [2]. One such incident is the case of a young female who presented with a large amount of ingestion of a caustic substance at her residence. Hemodynamic stabilization and securing the airway are crucial in the initial hours of corrosive injury to prevent early deaths. Early endoscopic assessment and liberal use of CT scans in cases of discordant findings on endoscopy will help in detecting the extent of the injury and plan further management accordingly. In cases of extensive caustic injuries, large duodenal perforations, traumatic injuries to the pancreas and duodenum, it is imperative to perform a pancreaticoduodenectomy although carries a high rate of morbidity (80%) and mortality (40%) [3]. The rate of complications is also high owing to hemodynamic instability, extensive injuries, and unanticipated difficulties at the time of surgery. All injured organs should be identified and resected during the first operation [4]. The reoperation rate in these patients is high one reason being delayed extension of caustic necrosis to other intra abdominal organs [5], which could have led to the dislodgement of feeding jejunostomy in this case. The other reasons for reoperations are intra abdominal collections due to anastomotic leaks, pancreatic and biliary fistulas, erosion of other intra abdominal organs, and hemorrhage. Although pancreaticojejunostomy has a high risk of leakage in the setting of the soft texture of pancreas, small duct size, and the complication rate following pancreaticojejunostomy at the time of primary surgery is lower than with closure of pancreatic duct remnant, although both carry similar morbidity and mortality rates [5]. Although mortality rates are high, surgery may be the only choice for these patients.

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