Case Report

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An unusual presentation of advanced pancreatic cancer: coeliac axis occlusion and acute upper gut ischemia

Abstract

We present a case of a fifty–year–old male with acute thrombosis of the celiac trunk secondary advanced pancreatic cancer. He was admitted to the emergency department with four days history of upper abdominal pain and coffee grown vomitus. Abdominal examination showed signs of generalised peritonitis. CT abdomen was done without contrast because of impaired renal function, the findings were big pancreatic neck and body mass, fat stranding, free fluid and distended bowel loops. Emergency laparotomy revealed big pancreatic mass arising from the neck and body of the pancreas, coeliac trunk completely infiltrated by the tumour, gangrenous stomach and lower oesophagus with big gastric perforation. He also had extensive splenic infarction and liver was normal. He was unstable during surgery and nothing could be done. He did not recover from anaesthesia and died in the ICU after 24 hours.

Keywords: coeliac–axis occlusion, gut ischemia pancreatic cancer, tumour

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Abbreviations: CT, computerized tomographic scan; SMA, superior mesenteric artery; ICU, intensive care unit; DJ, duodeno jujenal

Introduction

Celiac artery thrombosis with ischemia is a rare condition associated with risk factors for thrombosis or embolism. The manifestation is rare because of the large number of collaterals between the coeliac and superior mesenteric artery. Advanced pancreatic cancer may cause gradual occlusion with collaterals which needs special attention during pancreaticoduodenectomy. No case was reported with acute thrombosis and acute upper gut ischemia.

Case presentation

A 50–year–old male was admitted with four days history of acute upper abdominal pain, abdominal distension and coffee grown vomitus. He was tachycardic and hypotensive on admission and abdominal examination showed signs of generalised peritonitis. He had history of marked weight loss, recurrent upper abdominal pain and dyspepsia for the last eight months. Oesophagogastroduodenoscopy was done twice and the finding was not conclusive. CT abdomen was not requested by the treating physician during his illness. On admission, he was dehydrated with acute renal impairment (His serum creatinine was 3.8mg/dl and blood urea was 120mg/dl). The nasogastric tube output in the ER was four litres, dark fluid. While resuscitating the patient and preparing him for an emergency laparoscopy, CT abdomen (without contrast because of impaired renal function) was done which showed pancreatic neck and body mass, fat stranding, free fluid and distended bowel loops (Figure 1). Emergency laparotomy showed gangrenous stomach and lower oesophagus with 8*5cm gastric perforation. He also had extensive splenic infarction (Figure 2A–2D). There was normal blood flow to the liver duodenum and small bowel. He had big pancreatic mass involving the neck and body and the coeliac trunk was completely infiltrated by the tumour. The patient was in septic shock and had severe hypotension during the operation. Nothing could be done intraoperatively to help the patient; he was hemodynamically unstable and had extensive infarction. Big drains were fixed and the abdomen was closed. He did not recover from Anaesthesia and he died in the ICU after 24 hours.

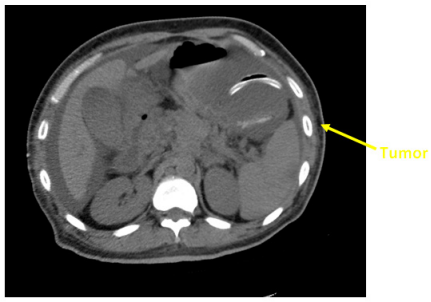

Figure 1 CT abdomen without contrast for the patient with acute coeliac trunk occlusion showing pancreatic neck and body mass, fat stranding, free fluid and distended bowel loops.

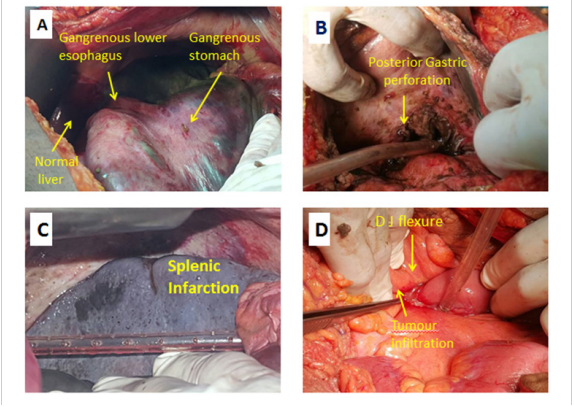

Figure 2 (A) Intraoperative photos. **(B)** Gangrenous stomach and lower esophagus. **(C)** Posterior Gastric perforation. **(D)** Splenic infarction. Tumour infiltrating the root of mesentery-superior mesenteric vessles. (DJ means duodeno-jujenal flexure).

Discussion

Stenosis of the celiac artery is present in up to 10% of patients undergoing pancreaticoduodenectomy, as reported in series where arteriography was routinely performed before surgery, however, this has no clinical significance, owing to collateral pathways that develop from the SMA via the inferior pancreaticoduodenal artery to provide retrograde flow through the gastroduodenal artery. Z Soonawalla[1] addressed the importance of identification of these vascular anomalies during pancreatectomy and proper reconstructive procedures. Few cases of acute celiac artery thrombosis with gastric ischemia and splenic infarction were reported in the literature, mostly due myloproliferative and thrombotic disorders.[2] TJ Watson[3] from Harrisburg USA reported a patient with acute thrombosis of the coeliac trunk secondary to alcohol–induced pancreatitis. He was treated emergently with open thrombectomy.

In our case, the patient presented with acute abdominal pain, he had undiagnosed advanced pancreatic cancer with invasion of the coeliac artery and laparotomy showed gastric ischemia and splenic infarction. The ischemia was extensive; extending to the lower oesophagus and the patient was unstable during surgery, so there was no chance for major resection and lengthy procedure. This is probably the first case report of acute coeliac artery occlusion and upper gut ischemia secondary to locally advanced pancreatic lancer. T Guilbaud and his colleagues[4] from Marseille, France reported a patient with advanced pancreatic cancer and median arcuate ligament stenosis with a diminished blood to the liver.

Bearing a high index of suspicion and urgent CT abdomen with intravenous contrast is needed in patient with advanced pancreatic cancer presenting with acute upper abdominal pain. In the case of hemodynamically significant celiac axis stenosis, endovascular approach and stenting may release the occlusion; alternatively an emergency laparotomy may be indicated with intraoperative Doppler assessment of the celiac artery. Median arcuate ligament release was mentioned to be efficient in relieving compression and restoring an adequate blood flow.[4] In some patients with delayed intervention, resection of devitalized organs may be indicated.

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None.

Conflict of interest

The author declares no conflict of interest.

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