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Case Report

Immunosuppression induced acute pancreatitis in renal transplant recipient – Imaging and interventional management

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ABSTRACT

Acute pancreatitis is a rare but often lethal complication in post-transplant patients. We describe a case of acute pancreatitis in a male patient 11 years after renal transplantation with azathioprine for immunosuppression as possible causative agent. Laboratory and imaging diagnosis of acute pancreatitis followed by successful endoscopic interventional management using transgastric catheter drainage is presented.

1. Introduction

Acute pancreatitis after renal replacement was first described by Starzl in 1964.[1] Acute pancreatitis is a rare but often a lethal complication in post-transplant recipient. Azathioprine is one of the incriminated agents out of the multiple possible aetiological factors.[2] We describe a case of acute pancreatitis in a male recipient 11 years after renal transplantation.

2. Case report

A 36 years old male, follow up case of end stage renal disease with chronic glomerulonephritis as the cause underwent live related renal transplantation in December 2002. At the time of discharge, the patient showed good graft function and was under follow up with triple immunosuppression (Azathioprine, Cyclosporine, and Prednisone).

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In January 2009, he developed pulmonary tuberculosis and was treated for the same with antitubercular treatment from February 2009 to February 2010.

In early January 2013, patient developed severe epigastric pain with nonbilious vomiting associated with mild fever and was treated with parenteral analgesics. Later again in January 2013, he developed lower respiratory tract infection. This was diagnosed as *Klebsiella* pneumonia and treated with intravenous antibiotics.

In February 2013, patient was admitted in the Department of Nephrology with complaints of decreased appetite, early satiety and evidence of graft dysfunction. The patient was afebrile and physical examination revealed fullness of epigastrium and right upper quadrant. This clinical pattern was suggestive of acute pancreatitis. Initial laboratory tests revealed elevation of serum amylase (379 U/L) with normal serum levels of AST (37 U/L), ALT (19 U/L), alkaline phosphatase (126 U/L) and total serum bilirubin (1 g/dl), total leukocyte count (8.8 × 1000/μL). His serum creatinine level was slightly elevated (2.95 mg/dl). Ultrasound abdomen showed retrogastric collection (volume – 843 ml approx.) with nonvisualization of pancreas without cholelithiasis or choledocolithiasis. The renal graft had normal sonographic appearance and Doppler parameters. Due to suspected graft dysfunction and elevated serum creatinine level, non contrast computed tomography (NCCT) of abdomen was done. It revealed a large well defined collection in lesser sac, almost completely replacing the pancreas and displacing the stomach anteriorly – consistent with necrotising pancreatitis (Fig. 1a, c). NCCT also showed a small pelvic collection separate from the transplant kidney – due to acute pancreatitis (Fig. 1b). In consultation with the department of gastroenterology, patient was treated for acute pancreatitis with standard medical care including intravenous fluids, analgesics and reduction of dose of azathioprine. Nasojejunal tube was placed and enteral feed initiated through nasojejunal tube. This resulted in quick improvement of the patient's condition and he was discharged. Graft dysfunction also improved with serum creatinine level of 1.64 mg/dl at discharge.

About one month after discharge, he again presented in the emergency with severe epigastric pain, intermittent fever and vomiting. His physical examination revealed lump in the epigastric region of size approximately 7.0 × 6.0 cm with ill defined borders and cystic consistency. No organomegaly was noted. The laboratory tests on the day of admission revealed raised levels of serum amylase (367 U/L) and AST (67 U/L) with normal levels of ALT (33 U/L), alkaline phosphatase (112 U/L), total bilirubin (0.59 g/dl), total leukocyte count (5.1 × 1000/μL) and serum creatinine (1.4 mg/dl).

In the setting of pre-existing acute pancreatitis and recently recovered graft dysfunction, a repeat NCCT abdomen was done due to a possible danger of contrast-induced nephropathy. It revealed increase in size of the collection in lesser sac, almost completely replacing the pancreas, displacing the stomach anteriorly. Two additional small collections were also noted lateral and antero-inferior to the stomach.

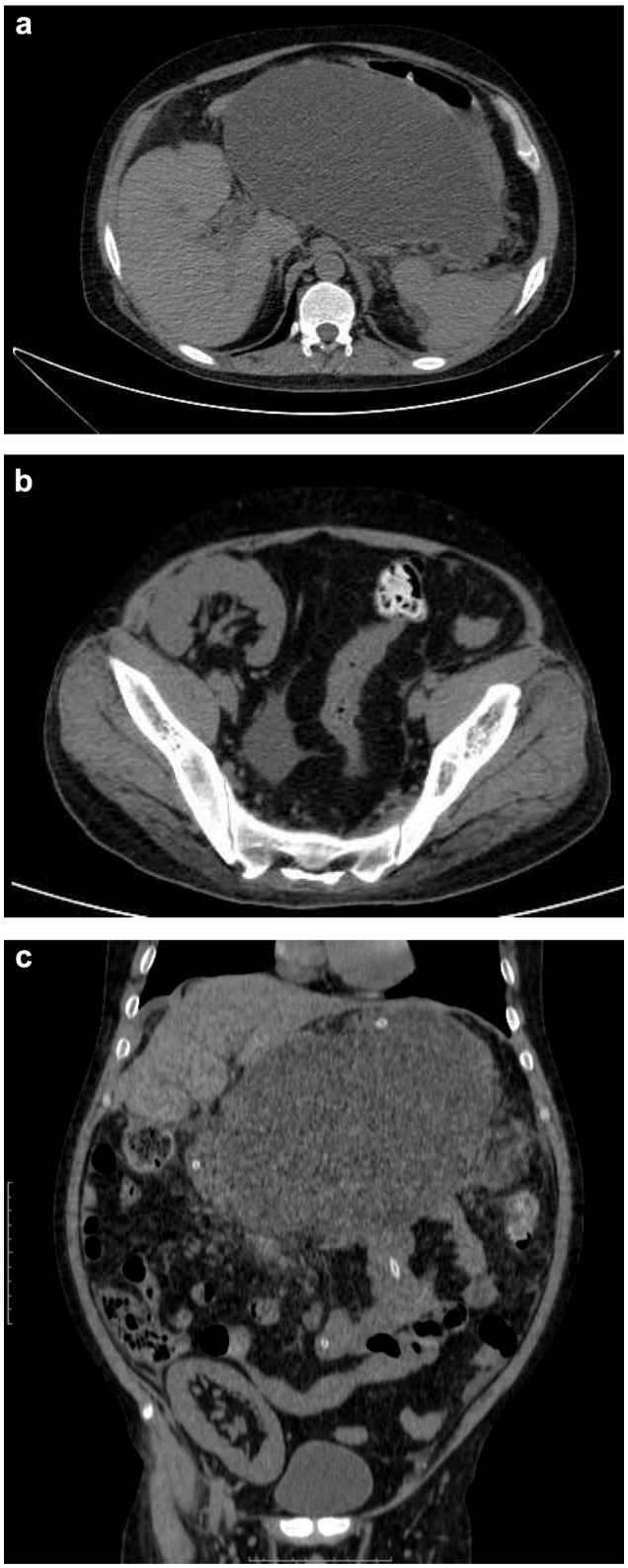

Fig. 1 – (a) Non Contrast CT abdomen – Large intrapancreatic collection. (b) Non Contrast CT pelvis (axial image) – Transplant kidney in right iliac fossa with separate pelvic collection. (c) Non Contrast CT pelvis (coronal image) – Transplant kidney in right iliac fossa with large pelvic collection. Small pelvic collection was located more posteriorly and not visible in this coronal plane.