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CASE REPORT | PANCREAS

Endoscopic Retrograde Cholangiopancreatography as a Risk Factor for Pancreatic Panniculitis in a Post-Liver Transplant Patient

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Abstract

Post endoscopic retrograde cholangiopancreatography (ERCP) pancreatic panniculitis is a rare condition caused by fat necrosis following release of pancreatic enzymes into the bloodstream. No previous reports of pancreatic panniculitis have been reported in post-liver transplant subjects undergoing ERCP. We present a 63-year-old cryptogenic cirrhotic female post-cadaveric liver transplant who underwent ERCP for suspected biliary stricture and subsequently developed pancreatic panniculitis.

Introduction

Pancreatic panniculitis is a rare condition, possibly due to fat necrosis following release of pancreatic enzymes, that affects only 0.3–3% of pancreatic diseases.[1] Endoscopic retrograde cholangiopancreatography (ERCP) may precipitate release of pancreatic enzymes and pancreatic panniculitis without significant clinical or radiological features.

Case Report

A 63-year-old woman with diabetes mellitus and post-cadaveric liver transplant on immunosupression with cyclosporine and mycofenolate mofetil presented with cholestasis 10 months after transplant. Magnetic resonance cholangiopancreatography (MRCP) showed dilated intrahepatic and donor common duct (1 cm) up to the level of the biliary anastomosis, suspicious of biliary stricture (Figure 1).

She was admitted for ERCP; her labwork was significant for total bilirubin 22 mmol/L, alkaline phosphatase 342 U/L, amylase 200 U/L, lipase 30 U/L, ALT 201 U/L, AST 76 U/L, GGTP 321 U/L, creatinine 140 mmol/L, and serum albumin 34 g/L. A guidewire was inserted into the common bile duct (CBD) and a cholangiogram showed a normal caliber up to the proximal CBD with an abrupt cut-off at a level that corresponded to the biliary anastomotic site. A CBD stent was placed distal to the stricture (Figure 1).

On the subsequent day, she developed central abdominal pain with distension. Blood investigations revealed WBC count 3.32/mm^3, amylase >4000 U/L, and lipase 22 U/L. Contrast-enhanced computed tomography (CT) scan showed no evidence of pancreatitis. On the same evening, she complained of pain and swelling in the left

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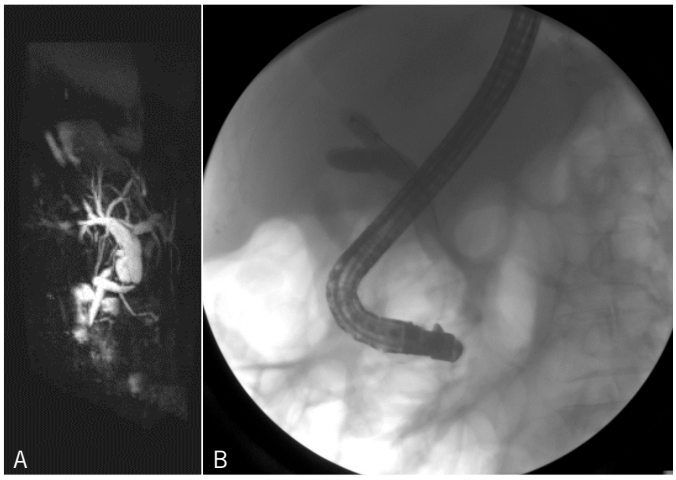

Figure 1. (A) MRCP showing dilated dilated intrahepatic duct and CBD, suspicious of biliary stricture. (B) ERCP image showing proximal stricture at site of biliary anastomosis.

ankle and shin, associated with local warmth and restriction of movements. Serum uric acid was normal (217 μmol/L). MRI of the ankles showed minimal effusion. Over the next 1–2 days, the skin over the shin became erythematous, tender, and swollen, with nodules measuring around 1–2 cm.

All cultures, including culture of ankle joint fluid, were sterile. Tests for *Mycobacterium tuberculosis*, herpes simplex virus, MRSA, *Cryptococcus*, and fungal culture were negative. Punch biopsy of the involved skin revealed lobular fat necrosis of the subcutis. Anucleate ghost adipocytes with basophilic rimming and amorphous eosinophillic material in the center along with foamy histiocytes and lymphocytes were seen. Features were consistent with pancreatic panniculitis (Figure 2). She was managed conservatively, and the pain and swelling over the shins gradually improved, coinciding with her decrease in abdominal pain and amylase level.

Discussion

Pancreatic panniculitis is a type of inflammation of the subcutaneous fat associated with pancreatic pathology.[2] The most common sites include distal lower extremities, particularly the ankle and pretibial area.[3] Ethanol-related pancreatitis is the most commonly reported cause, followed by pancreatic malignancies.[4,5] Exact pathogenesis is unknown, but trypsin may increase microcirculation permeability, leading to fat necrosis caused by circulating amylase and lipase.[6] Skin lesions can precede the development of pancreatitis.[2] Joint pain and arthritis have been reported, though mostly with high ethanol intake.[7,8] Pancreatic panniculitis has been reported in an 89-year-old woman post-ERCP, with high amylase and normal lipase with no symptoms.[9] Symptomatic post-ERCP pancreatitis with panniculitis has been reported in a 26-year-old girl who underwent ERCP for choledocholithiasis.[10] Treatment of the underlying cause usually results in resolution of the panniculitis. We postulate that post-ERCP hyperamylasemia may cause panniculitis without causing pancreatitis.

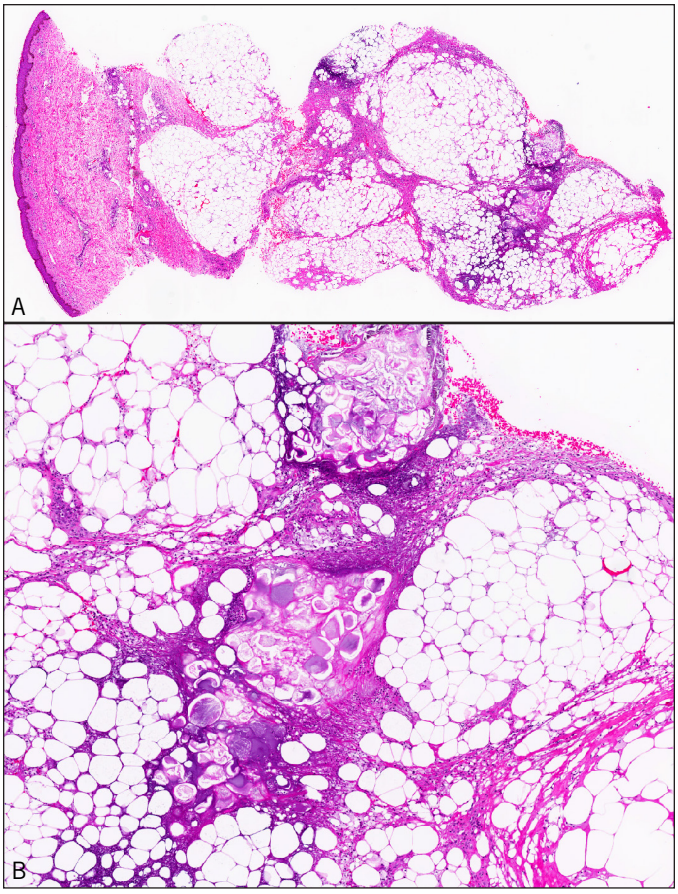

Figure 2. (A) H&E stain at 10x magnification showing areas paniculitis in the deep subcutaneous tissue. (B) H&E stain at 100x magnification showing fat necrosis as bluish to pinkish material within the subcutaneous fat lobule.

Disclosures

Author contributions: M. Sharma collected the data, wrote the manuscript, and is the article guarantor. DN Reddy and TC Kiat edited the article.

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