A Case of Biliary Cast Syndrome After Liver Transplantation

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INTRODUCTION

- Biliary Cast Syndrome (BCS) is characterized by biliary cast and debris resulting in biliary obstruction.
- Usually, a complication of orthotopic liver transplant (OLT) population occurs in 4-18% of recipients.
- The common symptoms seen in BCS patients include fever, jaundice and cholestatic liver enzyme elevation.
- About 22% of patients with BCS require a repeat OLT.

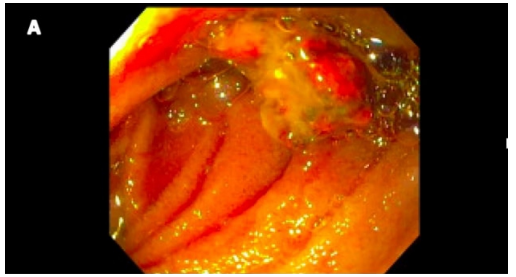
CASE

- A 67-year-old male with history of hypertension, alcoholic cirrhosis status post OLT three months ago was admitted to the hospital for evaluation of elevated liver associated enzymes (LAE).
- Liver transplant biliary anastomosis: Roux-en-Y choledochojejunostomy due to poor quality of the recipient hepatic duct.
- The patient was compliant with his transplant clinic visits and immunosuppression medications.
- Initial vital signs and physical exam were unremarkable. His CBC and BMP were within normal limits.
- Liver biopsy: mild portal edema with ductal proliferation and associated neutrophilic inflammation without evidence of rejection or infection.
- Laboratory findings were significant for elevated alkaline phosphatase 790 U/L, ALT 86 U/L, AST 1999 U/L, and GGT 1478 U/L. The total bilirubin was 0.90 mg/dL.
- Endoscopic retrograde cholangiopancreatography (ERCP) with balloon enteroscope was used to reach the choledochojejunal anastomosis where a biliary stone cast was found protruding into the lumen of the jejunum.
- A biopsy forceps was used to remove the 5.5 cm biliary cast.
- A cholangiogram was preformed with contrast into the right and left intrahepatic ducts without any stones.
- The patients Liver Enzymes improved post procedurally and was treated with ciprofloxacin for 5 days.

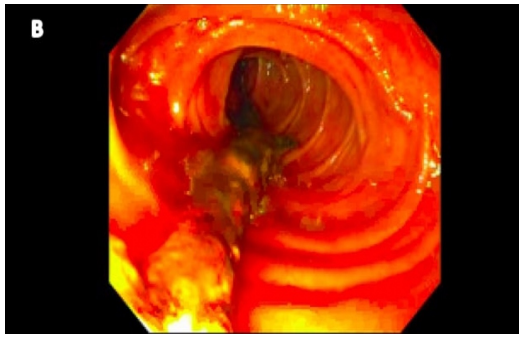
DISCUSSION

- Biliary complications after OLT occur in 10-25% of cases after liver transplantation. While biliary strictures, bile leaks and bile duct stones account for a majority of these complications, it is important to keep BCS on the differential diagnosis.
- The mechanism of cell injury can be a result of ischemia, acute cellular rejection, chronic rejection, infection or bile stasis resulting in desquamated epithelial cells forming hard casts with bile components.
- Treatment can include ERCP with sphincterotomy with removal of casts, lithotripsy with stent placement, and percutaneous drainage.

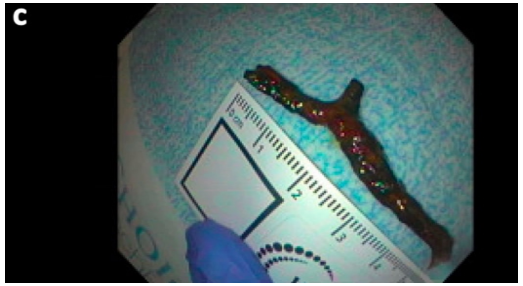
IMAGING AND ENDOSCOPY



A) Biliary Cast on endoscopy



B) Biliary cast removal on endoscopy



C) Biliary cast measuring 5.5 cm.