A Case of Secondary Sclerosing Cholangitis Due to Polytrauma

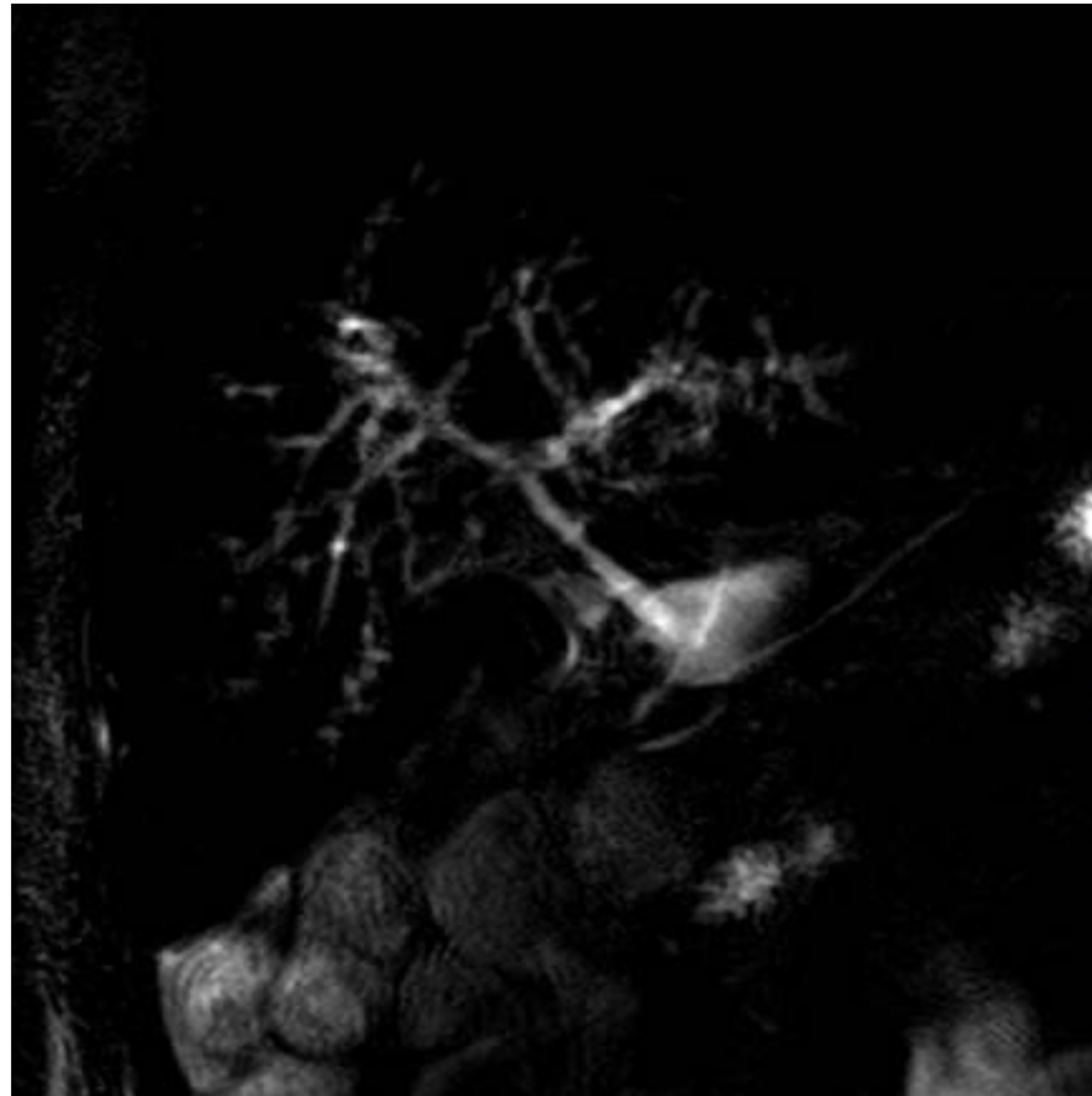
Sylvia Keiser, DO[1], Landon Brown, MD[2], Pranav Penninti, DO[2], Laura Rosenkranz, MD[2]
UT Health San Antonio Internal Medicine Dept.[1]; UT Health San Antonio Gastroenterology and Hepatology Dept.[2]

INTRODUCTION

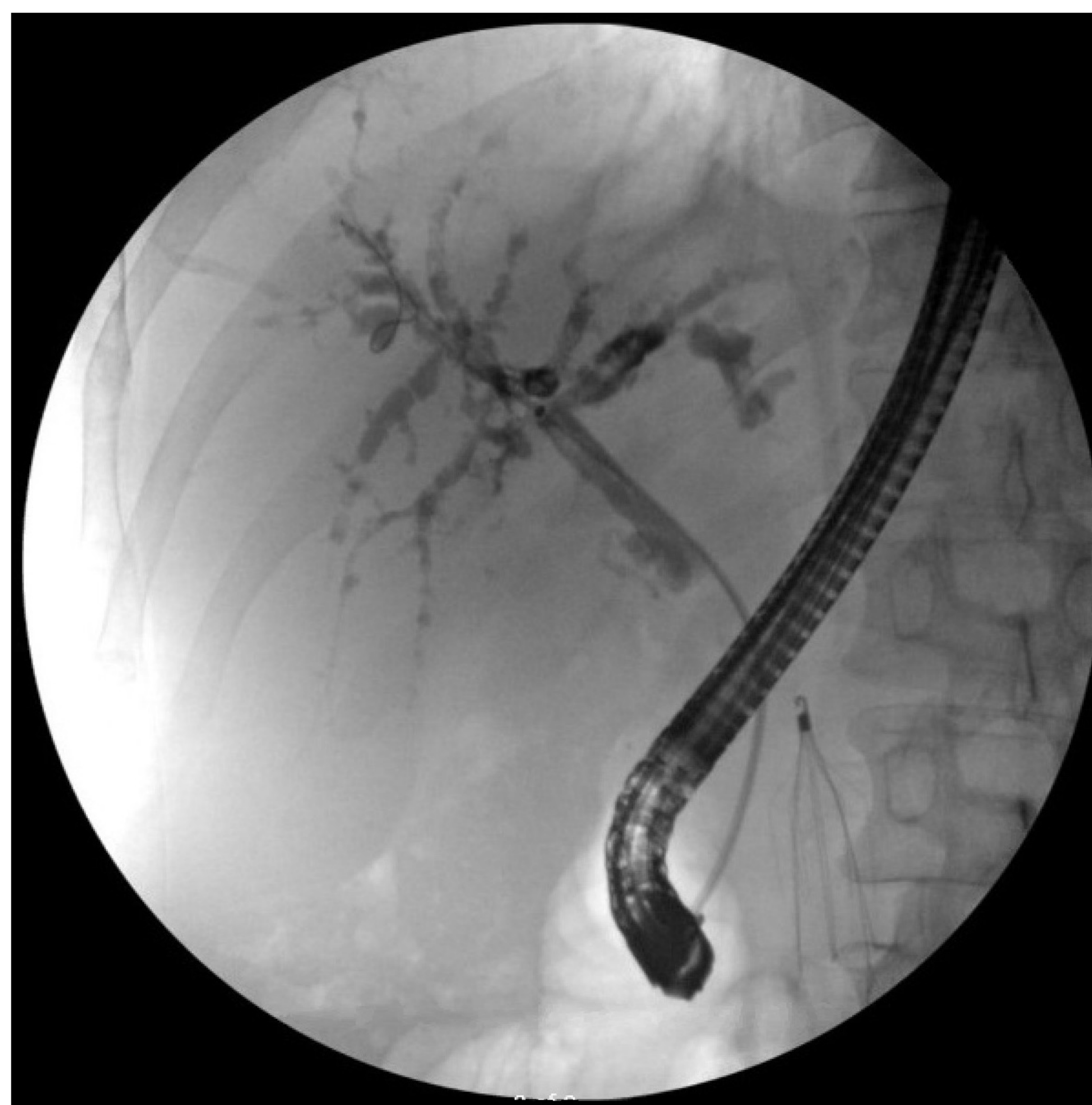
- Secondary sclerosing cholangitis (SSC) is a cholestatic biliary disease characterized by inflammation, fibrosis, stricture formation and ultimately destruction of the biliary tree leading to cirrhosis.
- SSC can appear morphologically similar to other biliary pathologies such as primary sclerosing cholangitis (PSC). However, unlike PSC, SSC is secondary to an underlying identifiable pathological process.
- We present a case of SSC occurring in the setting of a critically ill patient with polytrauma.

CASE REPORT

- 48-year-old male with no PMHx presented to the emergency room after a motorcycle accident where he sustained several orthopedic fractures and vascular injuries.
- Admitted to the ICU and underwent multiple surgeries.
- Hospital course complicated by several infections and septic shock. He required ECMO and CRRT for cardiovascular and renal failure, respectively.
- Developed persistent elevation of his liver enzymes, most notably his alkaline phosphatase (> 2,000U/L).
- Found to have an elevated IgG4 at 260mg/dL, raising the possibly of IgG4-mediated cholangiopathy.
- MRCP: intrahepatic biliary dilation with suspected multifocal areas of beading (not present on his initial imaging).



MRCP (above) and ERCP (below) showing dilated intrahepatic ducts with multifocal areas of beading



CASE REPORT CONT.

- Liver biopsy: prominent ductal proliferation with cholestasis.
- ERCP: dilated intrahepatic ducts along with a beaded appearance.
- The patient's alkaline phosphatase began to downtrend and he was discharged home with close hepatology follow up.

DISCUSSION

- Common causes of SSC include surgical or blunt biliary trauma, ischemic injury, intra-arterial chemotherapy, and recurrent pancreatitis.
- In order to diagnose a patient with PSC, one must first exclude secondary causes.

CONCLUSION

- Our patient's imaging demonstrated findings consistent with PSC; however, prior to his accident these findings were absent.
- Although he was found to have an elevated IgG4, the pathology from his liver biopsy did not demonstrate lymphoplasmacytic infiltration.
- Given the patient's history of polytrauma, septic shock, and overall critical illness, we suspect that he developed SSC.
- It is advisable for gastroenterologists to consider SSC on the differential of cholestasis as early diagnosis and treatment is associated with improved prognosis.