Stones, Strictures, & Atrophy: Treating Sequelae of Infectious Hepatolithiasis

Jason R. Stibbe, MD MSE, Stephen W. Landreneau, MD FACG
Section of Gastroenterology, Department of Medicine, Louisiana State University School of Medicine, New Orleans, LA

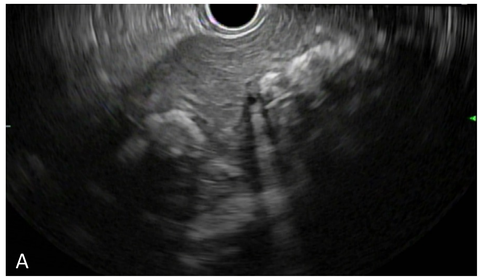
Introduction

- Primary intrahepatic cholelithiasis is associated with brown or pigmented stones and recurrent pyogenic cholangitis.
- Resultant from biliary stasis and infection
- Other important potential chronic complications exist beyond cholangitis of which gastroenterologists should be aware.

Case

- A 57 year-old man with history of diabetes returned from a 13-month stay in Japan to be admitted to an outside facility with DKA and cholangitis.
- Found to have a liver abscess and left hepatic duct stricture treated with sphincterotomy, biliary stenting via ERCP, abscess drainage, and cholecystectomy.
- Followed up externally for stent removal with normalization of liver chemistries
- CT imaging 1 year later showed persistent L hepatic duct stricture with intrahepatic segmental dilation.
- No early satiety, weight loss, or jaundice.
- Referred to our service for further evaluation of chronic indeterminate biliary stricture.
- EUS demonstrated extensive small and large left-sided hepatolithiasis (A).
- Cholangiography during ERCP demonstrated complete filling defect of the L intrahepatic biliary ductal system (B) preventing selective guidewire passage.
- Cholangioscopy (C I-III) resulted in successful electrohydraulic lithotripsy (EHL) of stone burden in the L main hepatic system for selective wire passage and stenting of the L intrahepatic system with a plastic stent. Biliary epithelium appeared smooth and benign.
- The patient was given antibiotics with no complications.

Endoscopy & Radiology



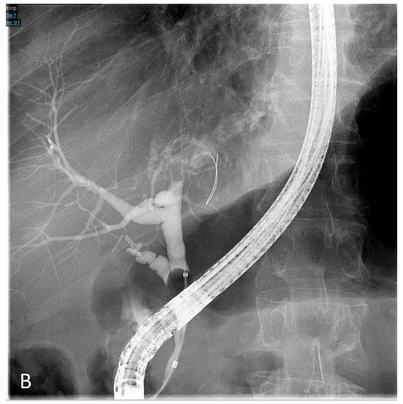
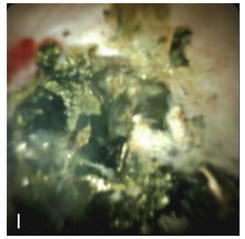


Figure A. Endosonographic hyperechoic densities with posterior acoustic shadowing in the intrahepatic bile ducts.
Figure B. Balloon-occlusion cholangiogram with complete L biliary system filling defect



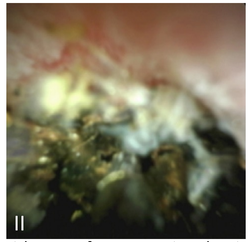


Figure C I-III. Cholangioscopy with stone fragmentation, benign-appearing biliary epithelium

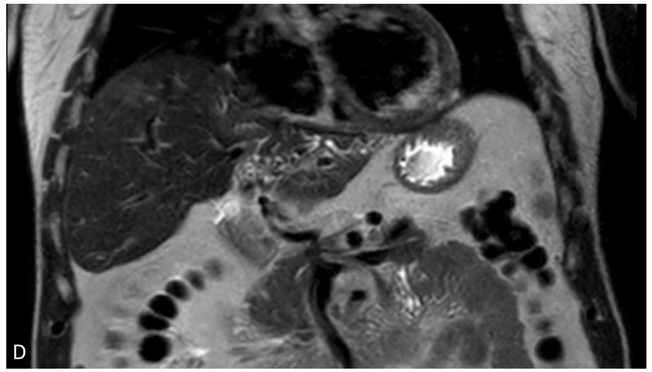


Figure D. Magnetic resonance imaging with atrophic left liver lobe in diseased segments

Case (Continued)

- ERCP 6 weeks later w/ cholangioscopy + EHL and stone removal in L intrahepatic ductal branches but ductal disease remained throughout smaller distal branches of the L lobe on cholangiogram.
- The main duct was protected with a fully-covered metal stent and antibiotics were given.
- Follow-up MRI/MRCP demonstrated atrophic left liver lobe (D) in addition to our findings.
- Left partial hepatectomy was thus performed for definitive therapy of the diseased lobe.
- The patient did well post-operatively with benign pathology.
- Ultimately followed up with stent removal and resolution of stone burden.

Discussion

- Treatment of other chronic sequelae of severe primary hepatolithiasis is important to reduce risk of progression to cirrhosis.
- Antibiotics are a cornerstone of therapy but may not be sufficient in cases of severe stone disease.
- Multiple interventional endoscopic methods are available and should be utilized to establish the diagnosis and optimize therapy.
- Surgery may be indicated in severe cases.
- While ursodeoxycholic acid (UDCA) would be insufficient as primary therapy, consideration can be given to a prophylaxis course after treatment of severe intrahepatic stone disease.

References

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