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## Laser lithotripsy in a difficult case of hepatocholedocholithiasis with distal common bile duct stricture done at the national kidney and transplant institute

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**Introduction:** The presence of intrahepatic lithiasis is an operative dilemma for surgeons. Not all cases are amenable to endoscopic retrograde cholangiography (ERCP) extraction, and intraoperative biliary extraction is fraught with difficulties. A usual option is to insert a t-tube to allow percutaneous choledoscope extraction post-operatively. Hepatic resection is also another option but has a higher morbidity. Recent studies have shown the applicability of laser lithotripsy in the removal of intrahepatic stones.

**Methods:** We report a case of intrahepatic lithiasis not amenable to ERCP and intraoperative biliary extraction that was done in a center specialized in urologic cases.

**Summary:** A 52 year old male presented colicky abdominal pain where ultrasound showed calculous cholecystitis. Patient was initially treated with antibiotics but developed jaundice with acolic stools after a week. Patient was admitted and repeat ultrasound revealed calculous cholecystitis with suspicious obstructing calculus in the proximal CBD, distal CBD stricture was noted. Ductal dilatation and stone extraction failed, hence a F10 stent was inserted and scheduled for surgery. Intraoperative ultrasound revealed multiple stones in the CBD and was extracted through a choledochotomy. A 0.5cm stone was impacted in the secondary radicles of the right hepatic duct. A nephroscope was inserted and stone basket extraction done but failed. Laser lithotripsy was used to break the stone into smaller fragments, flushed out and extracted more proximally. A roux-en-y hepaticojejunostomy was done to bypass the distal CBD stricture. Patient recovered and was eventually discharged.

**Conclusion:** In intrahepatic stones that have failed ERCP and biliary extraction, the combination of a surgical enterotomy, biliary endoscopy, and laser lithotripsy could provide a viable option for stone removal. However, for centers not specialized in hepatobiliary surgery with lack of equipment, this could pose a significant challenge on its applicability.