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Clinical Image

Incarcerated Choledocholithiasis through a Metallic Stent Mesh Treated by Electrohydraulic Lithotripsy and Peroral Cholangioscopy: Case Report

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1. Clinical Image

We present a case of incarcerated choledocholithiasis through a metallic stent mesh that was successfully treated with electrohydraulic lithotripsy (EHL) and cholangioscopy performed using the SpyGlassDS^R system (Boston Scientific, Japan).

An 80-year-old woman with lower bile duct cancer and a large bile duct stone was admitted to our hospital for obstructive cholangitis (Figure 1a). A pigtail plastic stent was initially placed to allow her sepsis to resolve. A 14-mm diameter uncovered biliary metallic stent (Niti-S 14, TaeWoong medical Co., Ltd, Korea) was placed during endoscopic pancreatobiliary cholangiography (ERCP) for the treatment of choledocholithiasis [1] (Figure 1b). The metal stent was preferable because it results in a lower rate of recurrent biliary obstruction with no migration [2]. Next, ERCP was performed to crush the 25-mm diameter stone using EHL [3, 4] with the SpyGlassDS^R system (Figure2a, b). The Use of a balloon catheter to remove the crushed stones was difficult because of the metallic stent edge. During the procedure, the bile duct stones were grasped using a basket catheter, but they were then incarcerated through the metallic stent mesh (Figure3a, b). We suc- cessfully separated and removed all of the incarcerated stones via EHL with the SpyGlassDS^R system. (Figure4a, b). Overall, we present a novel troubleshooting technique of incarcerated chole- docholithiasis through the metallic stent mesh.

Figure 1(a): Computed tomography image showing lower bile duct thickness and stones,

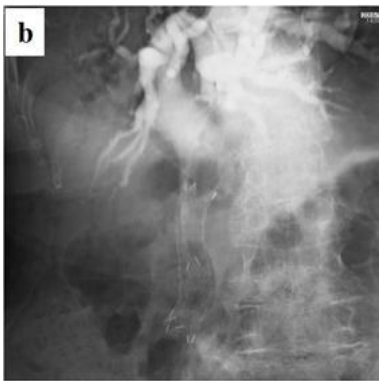

Figure 1(b): Radiograph showing placement of a 14-mm diameter biliary metallic stent.

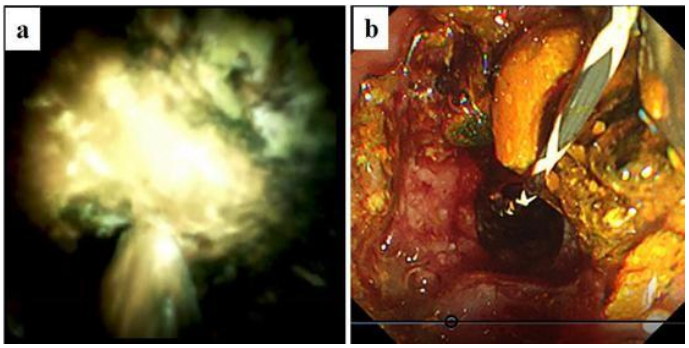

Figure 2(a, b): Cholangioscopy and radiograph showing crushing and removal of the 25-mm diameter stone using electrohydraulic lithotripsy with SpyGlassDS^{R} system (Boston Scientific, Japan).

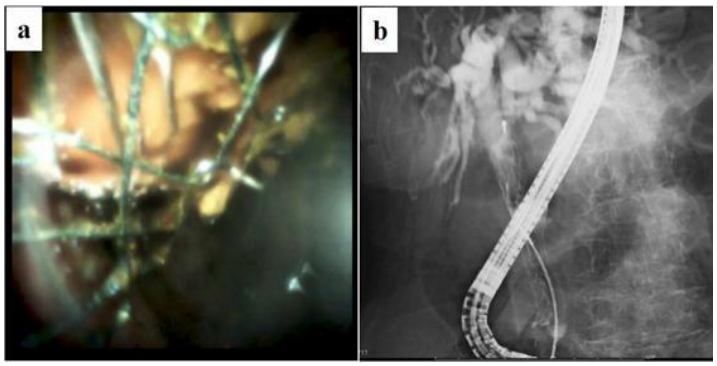

Figure 3 (a, b): A basket catheter was used to grasp the bile duct stones through the metallic stent mesh, as shown by cholangioscopy and the radiograph.

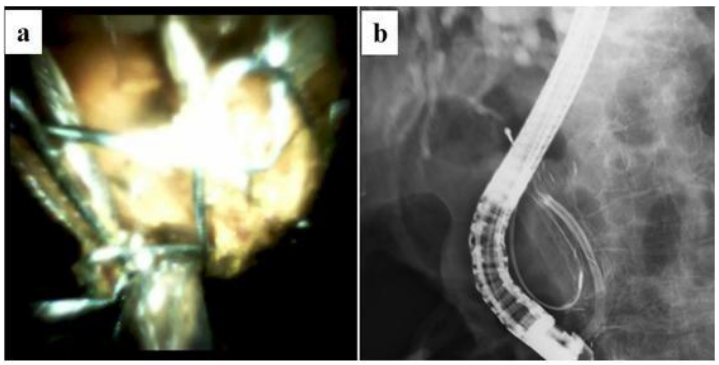

Figure 4(a, b): The incarcerated stones were crushed and released using electrohydraulic lithotripsy with the SpyGlassDS^{R} system.

2. Keywords: Incarcerated choledocholithiasis; Metallic stent mesh; Electrohydraulic lithotripsy, Peroral cholangioscopy

References

1. Karen H, Chung SL, Glen AD. Covered self-expanding metal stents for the management of common bile duct stones. Gastrointest Endosc. 2017; 85: 181-186.

2. Kikuyama M, Shirane N, Kawaguchi S. New 14-mm diameter Niti-S biliary uncovered metal stent for unresectable distal biliary malignant obstruction. World J Gastrointest Endosc. 2018; 10: 16-22.

3. Binmoeller KF, Bruckner M, Thonke F. Treatment of difficult bile duct stones using mechanical electrohydraulic and extracorporeal shock wave lithotripsy. Endoscopy. 1993; 25: 201-206.

4. Brewer Gutierrez O I, Bekkali NLH. Raijman I. Efficacy and safety of digital single-operator cholangioscopy for difficult biliary stones. Clin Gastroenterol Hepatol. 2018; 16: 918-926.