Management of choledocholithiasis with an ultraslim cholangioscope in a patient with possible anaphylaxis to contrast medium

Adverse reactions to contrast medium during endoscopic retrograde cholangiopancreatography (ERCP) are rare [1]; however, once they occur, the subsequent ERCP becomes challenging. Although alternatives using carbon dioxide or gadolinium exist [2,3], resolution issues persist. Stone removal using a cholangioscope without fluoroscopy or contrast media in pregnant patients has been reported [4]; however, due to the thickness and rigidity of conventional cholangioscopes, this remains problematic. We report on common bile duct (CBD) stone removal without contrast media, using a novel ultraslim cholangioscope with a tip diameter of 2.3 mm (DRES Slim Scope; Japan Lifeline Co., Ltd., Tokyo, Japan) ([Fig. 1]) [5].

A 31-year-old woman presented to our department with recurrent abdominal pain and elevated biliary enzyme levels, suggesting choledocholithiasis. Computed tomography scans revealed no stones ([Fig. 2]); however, endoscopic ultrasonography (EUS) performed under sedation after pre-administration of antibiotics detected CBD stones ([Fig. 3]). With the patient’s condition stable post-EUS, we proceeded to ERCP. Following contrast medium injection into the bile duct, a diagnosis of anaphylaxis was made due to lowering blood pressure, decreased oxygen saturation, and rash developing over the body. The procedure was stopped; epinephrine administration improved the patient’s condition. The contrast medium was likely responsible for the anaphylaxis, despite the possibility of effects from other medications.

On another day, a second ERCP was performed without contrast medium using an ultraslim cholangioscope. Initially, a guidewire was placed in the bile duct using an ultraslim cholangioscope, and then the cholangioscope was inserted. After confirming the presence of stones ([Fig. 4a]), the cholangioscope was with-
drawn and stones were removed in a standard manner using a basket catheter under fluoroscopic guidance without contrast medium or a cholangioscope (▶Fig.5). Finally, the ultraslim cholangioscope verified stone clearance (▶Fig. 4b, ▶Video 1). Although ultrasmall cholangioscopes do not allow stone removal under direct visualization because of the slim design, they are less invasive in confirming the absence of residual stones after stone removal.

Conflict of Interest

The authors declare that they have no conflict of interest.

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