A novel technique for biliary strictures that cannot be passed with a guide wire

Bile leaks and strictures are the main biliary complications diagnosed by endoscopic retrograde cholangiopancreatography (ERCP) in living donor living transplantation (LDLT) patients. Endoscopic management is difficult mainly because of the complexity of duct-to-duct reconstruction. Recently, we have experienced five right-lobe LDLT cases with cholangitis in which ERCP revealed S-shaped anastomotic stricture (Figure 1a). The S-shaped stricture could not be passed with a guide wire, despite many maneuvers and changing positions of the sphincterotome and standard balloon. However, it became possible to pass the stricture with the guide wire by a novel method; the standard balloon was inflated near the stricture in the distal part of the common bile duct (Figure 1b). The inflated balloon was pulled slowly. After the common bile duct had become slightly stretched, it was possible to pass the stricture with the guide wire (Figure 1c). Thereafter, we were able to perform balloon dilation and plastic stent placement in all cases (Figure 1d). We believe that this novel technique is effective for S-shaped anastomotic strictures that cannot be passed with a guide wire.

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Figure 1  a S-shaped anastomotic stricture. b The inflated standard balloon near the stricture in the distal part of the common bile duct. Thereafter, it was pulled slowly. c After the common bile duct had become slightly stretched, it was possible to pass the stricture with the guide wire. d View following successful placement of a double plastic stent.