Endoscopic retrograde cholangiopancreatography (ERCP) with biopsy is a gold-standard procedure for pathological assessment of spreading of cholangiocarcinoma [1, 2]. Tumor existence at landmark biliary bifurcations should be assessed to consider the indication and extent of surgical resection. However, technical difficulties in pushing biopsy forceps against a biliary bifurcation may inhibit precise target biopsy. Here, we present a simple modification of widely used biopsy forceps for highly selective biopsy at the bifurcation of bile ducts at segments II and III (B2 and B3) (▶ Video 1).

An 80-year-old woman with suspected hilar cholangiocarcinoma was referred to our centre for hepatopancreatoduodenectomy (▶ Fig. 1). We conducted ERCP and obtained tissue specimens from hilar and distal bile ducts, all of which revealed adenocarcinoma. Tumor absence at the bifurcation of B2 and B3 was a prerequi-
site for curative resection. During the following session, no obvious cancerous epithelium at the bifurcation could be visualized using digital cholangioscopy (SpyGlass DS; Boston Scientific, Marlborough, Massachusetts, USA), although the visualization was not good. Cholangioscopy-guided biopsy for pathological confirmation acquired only a small amount of tissue. Therefore, we added a looped nylon thread to each cup of the standard biopsy forceps (Radial Jaw 4 pediatric; Boston Scientific) and inserted the forceps with loops over 0.025-inch guidewires (VisiGlide 2; Olympus, Tokyo, Japan) positioned in B2 and B3 (▶ Fig. 2). The forceps were successfully pushed against the bifurcation, and enough tissue was obtained (▶ Fig. 3). Based on positive pathological findings, the disease was considered unresectable, and chemotherapy was administered. High costs and the limited amount of tissue obtained via mini biopsy forceps (Radial Jaw 4 pediatric; Boston Scientific) and inserted the forceps with loops over 0.025-inch guidewires (VisiGlide 2; Olympus, Tokyo, Japan) positioned in B2 and B3 (▶ Fig. 2). The forceps were successfully pushed against the bifurcation, and enough tissue was obtained (▶ Fig. 3). Based on positive pathological findings, the disease was considered unresectable, and chemotherapy was administered.

References


Competing interests

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