A New Method of Achieving Deep Cannulation of the Common Bile Duct During Endoscopic Retrograde Cholangiopancreatography

Selective cannulation of the common bile duct (CBD) may be hindered by acute angles that are identified in the distal part of the duct. We describe here a trick for overcoming this difficulty, based on the ability to pass two instruments side by side through the working channel of therapeutic duodenoscopes.

A 67-year-old man with severe obstructive jaundice was transferred to our hospital two days after a laparotomy had demonstrated a mass involving the gallbladder, the CBD, and the duodenum. Histopathological examination of biopsy specimens obtained during surgery had revealed an adenocarcinoma. No biliary drainage had been carried out during the surgery, given the extent of the neoplasia. Preoperative endoscopic retrograde cholangiography (ERC) had demonstrated a stricture involving the upper and middle thirds of the CBD, but neither biliary drainage nor sphincterotomy had been performed.

On admission, the ERC examination was repeated. The papilla appeared to be displaced cephalad, secondary to a Billroth I anastomosis. Consequently, the prepapillary part of the CBD was distorted into a U-shape (Figure **1**). This prevented deep cannulation of the duct, even though various catheters and hydrophilic guide wires were used for a total duration of 60 minutes. At this time, a Teflon guide wire was inserted into the main pancreatic duct in order to displace the papilla caudad and straighten the bile duct. Alongside the guide wire, a standard sphincterotome was passed into the working channel of the endoscope. Once both instruments were in place, the guide wire was pushed to straighten the bile duct, and subsequent cannulation of the CBD was relatively easy (Figure **2**). Biliary sphincterotomy was performed uneventfully, as well as the insertion of a metal mesh stent. No procedure-related complications were detected.

This new method adds to the armamentarium of tricks available for gaining access to the CBD if its prepapillary part is distorted. This type of setting may be encountered in patients with a Billroth I anastomosis, as well as in patients without previous surgery. An alternative method, needle-knife sphincterotomy, is associated with a higher morbidity rate than sphincterotomy (1), especially in relatively inexperienced hands (2). With the method described here, caution is advisable when inserting the guide wire. In particular, residual amounts of contrast medium present in the catheter should be sucked out beforehand.

Figure 1: Cephalad displacement of the papilla secondary to a Billroth I anastomosis. The prepapillary part of the bile duct presents a U-shape, both branches of which appear as a single projection on the radiograph (black arrow). This prevented deep cannulation of the bile duct using a standard sphincterotome (white arrow) and various guide wires. Note that the endoscope is in a straight position to obtain *en-face* visualization of the papilla.

Figure 2: The prepapillary part of the bile duct is unrolled by pushing on a guide wire previously inserted into the main pancreatic duct. The sphincterotome easily enters the bile duct.

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