

Retroperitoneal perforation caused by precut biliary access in a Billroth II gastrectomy

An 81-year-old man was admitted because of cholangitis. He had previously undergone an open cholecystectomy and a gastrectomy with Billroth II reconstruction. Common bile duct dilation was present on transcutaneous ultrasound. An endoscopic retrograde cholangiopancreatography (ERCP) with a therapeutic duodenoscope was carried out. Standard techniques to cannulate the bile duct failed and a needle knife precut (NKP) was performed. Access to the common bile duct

was gained (▶ Fig. 1), and cholangiography showed common bile duct dilation but no definitive stones. The orifice of the KNP was enlarged by means of sphincteroplasty, and a retrieval balloon was passed several times ruling out choledocholithiasis. The patient did well during the entire intervention. In radiographs taken at the end of the procedure, the right kidney silhouette was clearly delineated (▶ Fig. 2). A retroperitoneal perforation was then suspected and it

was confirmed by a computed tomography (CT) scan. When reviewing the record of the procedure (▶ Video 1), it was observed that the NKP was extended a bit beyond the papillary mound, upwards in the endoscopic view, which corresponded to downwards in the real papillary anatomy. Following surgical consultation, a decision to operate was made due to the huge amount of retroperitoneal air present. During surgery only a pinpoint perforation was noted in the papillary area but no attempts to close it were made and a T-Keir tube was inserted. The patient recovered well.

Most papillary perforations during ERCP due to sphincterotomy and precut access can be managed medically and do not need surgical intervention. Nevertheless, a team approach to management of such complications will ensure the best outcome [1]. In Billroth II anatomy it is important to remember that the endoscopic view is reversed and the common bile duct runs downwards. In addition, radiographs must be done at the end of the procedure.

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Video 1

The needle-knife-papillotomy orifice was extended a bit beyond the papillary mound, upwards in the endoscopic view, which corresponded to downwards in the real papillary anatomy, causing the perforation.

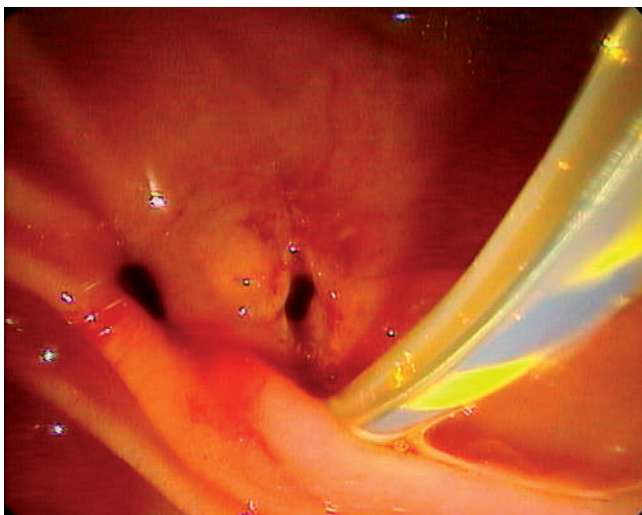


Fig. 1 After needle-knife-papillotomy, access to the common bile duct was gained.



Fig. 2 In radiographs taken at the end of the procedure, the right kidney silhouette was clearly delineated and a retroperitoneal perforation was suspected.