

Supplementary material

Appendix 1 Degree of difficulty based on the Schutz classification [7]

Degree of difficulty	Biliary procedures	Pancreatic procedures
Grade 1	<ul style="list-style-type: none"> - Diagnostic cholangiography - Biliary cytology - Stone extraction ≤10 mm - Dilation/stent placement/nasobiliary drainage of extrahepatic strictures 	<ul style="list-style-type: none"> - Diagnostic pancreatography - Pancreatic cytology
Grade 2	<ul style="list-style-type: none"> - Stone extraction >10 mm - Dilation/stent placement/nasobiliary drainage of hilar tumors or benign intrahepatic strictures 	<ul style="list-style-type: none"> - Minor papilla cannulation
Grade 3	<ul style="list-style-type: none"> - Intrahepatic bile duct stone removal - Bile duct stone removal using lithotripsy 	<ul style="list-style-type: none"> - Therapeutic procedures including pseudocyst drainage

Appendix 2 Definitions of variables

Liver disease: Defined as chronic hepatitis B/C, inherited liver disease (e.g., cystic fibrosis), liver cirrhosis, autoimmune liver diseases (e.g., primary biliary cirrhosis, primary sclerosing cholangitis, autoimmune hepatitis). Hepatocellular carcinoma or hepatic metastases were not considered as liver disease but were registered as malignancy.

Kidney disease: Defined as glomerular disease, tubule-interstitial diseases or acute and chronic kidney failure.

Cardiovascular disease: Defined as cardiac failure, cardiomyopathy, coronary artery disease, peripheral arterial disease or cerebrovascular disease.

Pulmonary disease: Defined as lower respiratory tract infections, chronic obstructive respiratory disease (e.g., bronchitis, asthma or chronic obstructive pulmonary disease) or chronic restrictive respiratory disease.

Acute pancreatitis: Defined as (suspicion of) acute biliary pancreatitis, based on clinical presentation with typical upper abdominal pain and elevated lipase or amylase levels. Based on the ASGE lexicon by Cotton *et al* [8].

Acute cholangitis: Defined as (suspicion of) acute cholangitis, based on clinical presentation with abdominal pain and cholestasis with a temperature >38°C or pus discharge during ERCP. Based on the ASGE lexicon by Cotton *et al* [8].

Acute cholecystitis: Defined as (suspicion of) acute cholecystitis, based on clinical presentation with typical right upper abdominal pain, temperature >38°C and radiological imaging.

Referral from other hospital: Defined as patients referred for ERCP specifically, for example after failure or the absence of expertise in the local hospital.

Indication of ERCP: Defined as the pathology for which ERCP was indicated.

Grade of difficulty: Defined as the *a priori* degree of difficulty of ERCP procedures based on a modified classification of Schutz *et al* [7] (Appendix 1)

Sedation success: defined as being able to complete the ERCP without patient discomfort or agitation causing premature termination of the ERCP

Diclofenac prophylaxis: Defined as rectal diclofenac administered prior to or directly after ERCP

Antibiotic prophylaxis: Defined as broad spectrum antibiotics or antibiotics covering biliary pathogens prior to or directly after ERCP