Background

Common bile duct access (CBD) may fail in less than 5% of the patients undergoing ERCP. Traditionally, these patients will require percutaneous biliary drainage. However, the advent of EUS-biliary drainage provides another endoscopic means of achieving CBD access at the same session of failed ERCP. However, how single session EUS-rendezvous ERCP (ERV) compares to percutaneous biliary drainage is not known.

Methods

This was a multicentre study (3 Asian hospitals, 2 university affiliated) of all patients that underwent single session EUS-rendezvous ERCP after failed CBD access by ERCP, performed between January 2012 and October 2014. The outcomes of these patients were retrospectively compared to those that received percutaneous-rendezvous ERCP or antegrade stenting (PTBD) prior to the introduction of the EUS technique. These procedures were believed to be comparable as the goal of the procedures was to achieve transpapillary CBD access for subsequent interventions. The main outcome parameters included the success rate in gaining CBD access, adverse event rates, the number of sessions of interventions required in each patient to obtain CBD access and luminal drainage.

Results

A total of 128 patients were included (ERV:PTBD = 64:64). There were no differences in background demographics (Table 1). A high success rate in obtaining CBD access (92.2% vs 100%, \( P = 0.056 \)) and achieving luminal drainage (93.8% vs 85.9%, \( P = 0.241 \)) was observed in both groups. This was possible in a single session in all patients within the ERV group. Whilst, the median (range) number of sessions required to obtain CBD access in the PTBD arm was 2 (1-2), \( P < 0.0001 \). Similarly, significantly more interventions were required in the
PTBD group to achieve transluminal drainage (3 [2-9] sessions, \( P = 0.032 \)). The adverse events rates were comparable between the 2 groups (17.2\% vs 23.4\%, \( P = 0.510 \)). The most common adverse events were cholangitis (6.2\%) in the ERV arm and tube dislodgement (9.4\%) in the PTBD group.

**Conclusions**

Single-session EUS-rendezvous ERCP may replace PTBD as the procedure of choice in patients with failed ERCP. The procedure allows same session CBD access and luminal drainage with avoidance tube related adverse events.