Background Endoscopic papillary large-balloon dilation (EPLBD) is an alternative to endoscopic sphincterotomy (EST) for treatment of common bile duct (CBD) stones. However, limited data exist regarding the comparison of the long-term outcomes for these techniques. In this study, we aimed to compare the long-term outcomes after EST with those after EPLBD alone for removal of CBD stones.

Methods The records of patients with EST or EPLBD alone referred for CBD stones retrieval between June 2008, and July 2015 were retrospectively reviewed. Complete stone clearance, ERCP-related adverse events, and late biliary complications during long-term follow-up were analysed.

Results Basic patient characteristics were similar between the groups that underwent EST (n=60) and EPLBD alone (n=161). EPLBD alone compared with EST resulted in similar outcomes in terms of complete stone clearance (99.4% vs 100%, p=0.54) and ERCP-related adverse events (6.8% vs 10.0%, p=0.41). The mean duration of the follow-up was 74.5 months and 71.6 months who underwent EST and EPLBD alone, respectively (p=0.42). Late biliary complications were frequently occurred in the EST group than EPLBD alone group (11 [18.6%] vs 16 [10.2%]), although the difference did not reach statistical significance (p=0.11). Furthermore, the incidence of cholangitis without stone recurrence was significantly higher in the EST group than EPLBD alone group (5.1% vs 0%, p=0.02).

Conclusions As an alternative to EST, EPLBD has similar efficacy and safety for managing CBD stones. During long-term follow-up, patients who underwent EPLBD alone may have less late biliary complications compared with those after EST.

Background Current evidence supporting the utility of single-operator peroral cholangioscope (SOPOC) in the management of difficult bile duct stones is limited. We conducted the present systematic review and meta-analysis to evaluate the efficacy and safety of SOPOC in the treatment of difficult bile duct stones.

Methods A search of studies up to January 2018 was acquired, using MEDLINE, EMBASE, the Cochrane Library and Google Scholar. Quality assessment of the studies was completed with a modified Newcastle-Ottawa Scale. The main outcomes of interest were single-session stone clearance rate, complete stone clearance rate and adverse events. We calculated the pooled proportions with random-effects models. Subgroup analyses were also performed based on SOPOC type.

Results A total of 21 studies involving 2490 patients met the inclusion criteria. Average number of stones per patient was 2.2. Mean stone size was 17.4 mm. The pooled proportion of patients with single-session stone clearance was 72.5% (95% confidence interval [95% CI], 63.2%–80.9%). (Figure 1). Complete stone clearance was achieved in 94.7% (95% CI, 90.1%–98.1%) of patients with median endoscopic sessions of 2.0. The pooled adverse event rate was 5.5% (95% CI, 3.3%–8.2%). For SOPOC type SpyGlass and SpyGlass DS, single-session stone clearance rate was 69.1% (95%CI: 56.3%–80.6%) and 80.0% (95%CI: 75.8%–83.9%), respectively. Complete stone clearance rate was 92.8% (95% CI: 86.5%–97.5%) and 96.7% (95%CI: 88.1%–100.0%), respectively. Adverse events rate was 6.2% (95%CI: 3.4%–9.7%) and 3.0% (95%CI: 1.8%–4.4%), respectively.

Conclusions SOPOC is an effective and safe management option for the treatment of bile duct stones when conventional methods have failed. More randomised controlled trials are needed to confirm these outcomes.

Abstract IDDF2018-ABS-0138 Figure 1