

中文題目：比較內視鏡括約肌切開術，內視鏡乳頭大氣球擴張術和局限的內視鏡括約肌切開術合併內視鏡乳頭大氣球擴張術三種內視鏡方法治療大的的膽管結石

英文題目：Comparison of endoscopic sphincterotomy, endoscopic papillary large balloon dilation and limited endoscopic sphincterotomy plus endoscopic papillary large balloon dilation treatment for removal of large bile duct stone

作者：陳俊廷<sup>1</sup>，吳鎮琨<sup>2\*</sup>，梁志明<sup>2</sup>，盧龍生<sup>2</sup>，邱逸群<sup>2</sup>，郭仲謀<sup>2\*</sup>

服務單位：<sup>1</sup>高雄長庚紀念醫院內科部，<sup>2</sup>高雄長庚紀念醫院胃腸肝膽科

**Background:** Large bile duct stones (> 15 mm) appear to be more difficult to be remove with conventional methods such as endoscopic sphincterotomy (EST) or endoscopic papillary balloon dilation (EPBD). However, EPBD is limited to small stones of < 10 mm in diameter because it dose not enlarge the bile duct orifice to the same extent as EST. Combination method may be beneficial.

**Aims:** To compare and evaluate the therapeutic outcome and complications of EST, EPLBD and limited EST plus EPLBD for large bile duct stone extraction.

**Patients and Methods:** A total of 185 patients with large bile duct stones(> 15 mm in transverse diameter) were recruited. Patients was divided into 3 groups: EST group (n=31), EPLBD group (n=96) and limited EST plus EPLBD group (n=58). The primary outcomes are the success rate of complete stone removal and presence of complications after three endoscopic treatment.

**Results:** Limited EST plus EPLBD group resulted in similar outcomes in overall successful stone removal (98.3% ) compared to EST group (93.5%) and EPLBD group (92.7%). Limited EST plus EPLBD group had higher success rate of the first session treatment (98.3%) compared to EST group (83.9%) and EPLBD group (86.5%) (p=0.032). Post-procedure bleeding occurred in EST group (9.7%) was higher than limited EST plus EPLBD group (0%) (p=0.038). Procedural time of the first session treatment in limited EST plus EPLBD group was longer (32(12-26) min) than EST group (23.5(17-68) min) and EPLBD group(25.0(14-60) min) (p=0.001). Recurrent bile duct stone occurred in 4 (4.2%) EPLBD group and 5 (8.6%) limited EST plus EPLBD group. Multivariate analysis revealed that dilated bile duct with the largest common hepatic duct (CHD) or common bile duct (CBD) diameter was the only risk factor for bile duct stone recurrence in limited EST plus EPLBD group (p=0.022).

**Conclusion:** Limited EST plus EPLBD is equally effective as EST and EPLBD for the removal of large bile duct stone.