Double Guidewire Technique vs. Transpapillary Pancreatic Sphincterotomy in Difficult CBD Cannulation

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Background/Aim: Successful cannulation of the common bile duct (CBD) is an important benchmark of ERCP. Difficulty in CBD cannulation is one of the main risk factors for post-ERCP pancreatitis. Recently, pancreatic duct guidewire assisting bile duct cannulation (double guidewire technique, DGT) or transpapillary pancreatic sphincterotomy have been considered a promising alternative approach in difficult cannulation situations. The aim of this study was to compare the performance of DGT with the TPS in the patients in whom CBD cannulation is difficult to perform.

Patients/Methods: When free bile duct cannulation for endoscopic sphincterotomy was not possible within 10 attempts by expert endoscopist and selective pancreatic duct cannulation was achieved, guidewire was placed in the pancreatic duct. The patients were then randomized into DGT or TPS groups. After this, bile duct cannulation was retried using DGT or TPS. Main outcome measurements were frequency of successful CBD cannulation and post-procedure related complications.

Results: The groups were similar with regard to patient demographics. A total of 71 patients were enrolled. 34 patients were assigned to the DGT group and 37 to the TPS. Successful CBD cannulation was achieved in 27 (79.4%) of 34 patients in the DGT group and 29 (78.4%) of 37 patients in the TPS group. The median cannulation time was 24 minutes in the DGT group and 25 minutes in the TPS group. There was no significant difference in the successful CBD cannulation rate or median cannulation time between two groups. The overall incidence of post-procedure pancreatitis was 38.2% (13/34) in the DGT group, and 10.8% (4/37) in the TPS group. Post-procedure pancreatitis was significantly higher in DGT group (p=0.011).

Conclusion: In patients with difficult CBD cannulation, DGT and TPS facilitate biliary cannulation and show the similar success rates. But Post-procedure pancreatitis is significantly higher in the DGT group.