Risk Stratification for the Development of Post-ERCP Pancreatitis by Sphincter of Oddi Dysfunction Classification

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ABSTRACT

Context Patients with sphincter of Oddi dysfunction (SOD) who undergo manometry are at substantially higher risk (15-30%) for developing post-ERCP pancreatitis compared with patients undergoing ERCP for other disease states (2%-5%). Objective To explore if there is a difference in the frequency of post-ERCP pancreatitis in patients with manometrically confirmed SOD I, II and III. Methods A retrospective review of all patients who underwent an ERCP with SOD I or patients with manometrically confirmed SOD II or III (mean basal sphincter pressure ≥40 mm Hg) from 2006 to 2010 was performed. The primary outcome measure was development of post-ERCP acute pancreatitis in each of the SOD groups. Factors associated with acute pancreatitis in each group were examined by univariate and multivariate analysis. Results: We identified 147 patients with SOD. Biliary sphincterotomy was performed in all patients and pancreatic sphincterotomy was performed in 68/147 (46%) patients. All patients underwent stenting of the pancreatic duct. Post-ERCP pancreatitis occurred in 27% of the study cohort. Patients with SOD III had a higher frequency of post-ERCP pancreatitis compared to the SOD II and SOD I group (37% vs. 21% vs. 13%, respectively). Multivariate analysis revealed that the type of SOD was then strongest predictor of pancreatitis with SOD III having the greater frequency of post-ERCP pancreatitis (OR=7.68; P=0.05) compared to those with SOD I. Patients with SOD III had a 4 times greater frequency of developing post-ERCP pancreatitis compared to those with SOD II. Conclusions SOD III is strongly associated with the development of post-ERCP pancreatitis compared to SOD I and SOD II.