Highly sensitive troponin in myocardial ischemia during endoscopic retrograde cholangiopancreatography

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Aim: Procedural risks of ERCP are well recognized but significance of cardiac risks remains controversial. This study aimed to evaluate ERCP-related highly sensitive cardiac troponin I (hs TnI) release in even small amounts of myocardial injury and to analyze potential relationship between myocardial ischemia and the development of post-ERCP pancreatitis.

Methods: 120 patients (aged 18-93 years) scheduled for ERCP were enrolled in this study. Cardiovascular risk factors were identified in 60% of patients. All patients were assessed clinically and with electrocardiography for the presence of ischemic disease before the procedure. Hs TnI (limit of detection 1.9 ng/l) was measured at baseline (pre- ERCP) during ERCP and 2 h post-ERCP. During ERCP procedure, patients were also monitored with Holter tape recorder. Amylase and lipase were measured before and 24 hours after ERCP.

Results: 12 patients (12%) developed myocardial ischemia/injury during ERCP with new ECG changes and without any clinical symptom. 50% of change in Hs TnI second measurement was documented in 12 patients (p<0.01). Patients with myocardial ischemia during ERCP had a significantly higher values of amylase and lipase levels (60.3% vs. 16.2%; p<0.01).

Conclusions: The relationship was found between hs TnI small elevation and new ECG and rhythm changes on Holter during ERCP. Post ERCP pancreatitis was associated with myocardial ischemia/injury during ERCP.

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