

Elastase 1 in Endoscopic Retrograde Cholangio-Pancreatography (ERCP)

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Objective: The purpose of study was the biochemical assessment of pancreatic damage during ERCP using markers of pancreatic inflammation, and the correlation with clinical parameters and disease outcome.

Materials and Methods: In 38 consecutive patients with no renal insufficiency or severe hepatic inflammation (15 males and 16 females, mean age 61 years) undergoing ERCP we assessed 24 hours before, 2 hours and 18 hours after ERCP the following parameters: AST, ALT, G-GT, ALP, AMS (serum and urine), LDH and Elastase 1 (ELISA, ScheBo[®]• Tech, Germany, normal values 0.1 – 4 ng/ml).

Results: Elastase was elevated in 7/38 (18 %) patients after ERCP and correlated statistically with serum amylase ($p < 0.05$) with a ratio of elastase/amylase = 1/376. It also correlated with the pathology of the pancreatic and lower part of the common bile duct. Clinically diagnosed post – ERCP pancreatitis was evident in 2/38 (5 %) of patients with elastase > 3.5 ng/ml (in the 2 hour samples) while biochemical pancreatitis was diagnosed in another 4 (10 %) free of symptoms patients.

Discussion: In ERCP the routine use of elastase may be of importance because of its ability not only to reveal pancreatic inflammation but also to offer early prediction of the post – ERCP outcome (earlier than serum or urine amylase) when levels are > 3.5 ng/ml.