Pancreatitis GP2

Serological marker for acute pancreatitis
Pancreatitis GP2 (REF 3950)

ELISA for the serological diagnosis of acute pancreatitis

The serological diagnosis of acute pancreatitis, a major cause for hospitalization in case of acute abdominal pain, is still a laboratory challenge. The incidence of acute pancreatitis ranges from 17.5 to 73.4 cases per 100,000 individuals globally. Although the pathophysiology of acute pancreatitis is not understood entirely yet, it is now widely acknowledged that premature intra-pancreatic activation of proenzymes in particular trypsinogen stored in zymogen granules (ZG) plays an important role. Thus, acute pancreatitis onset is characterized by acinar cell injury resulting in an impaired polarity of proenzyme secretion and basolateral release of ZG contents.

A well-characterized animal model of acute pancreatitis revealed elevated major zymogen granule membrane glycoprotein 2 (GP2) levels as a potential serum marker. Based on this model, an ELISA for the detection of acute pancreatitis-specific GP2 has been developed and the diagnostic and prognostic value of serum GP2 levels in a large cohort of patients with acute pancreatitis and an extensive disease-control group have been investigated **.

Study in cooperation with intensive care unit of the department of surgery (University Hospital Magdeburg) including

- 153 patients with acute pancreatitis (AP: up to 3 days of disease; day 4 to 10; more than 10 days)
- 26 with chronic pancreatitis (CP)
- 125 with pancreatic neoplasms (PNpl)
- 324 with non-pancreatic neoplasms (liver or biliary cancer LBCa, gastrointestinal cancer GCa, neuroendocrine tumor NET, sarcoma Sa)
- 109 patients with benign liver (bL) or biliary disease (BD)
- 67 with gastrointestinal disease (peptic ulcer PU, peritonitis PT)
- 101 healthy subjects (BD)

Conclusions

- The alpha isoform of glycoprotein 2 (GP2a) is a specific marker for acute pancreatitis
- GP2a enables the differentiation to chronic pancreatitis and pancreatic neoplasms
- GP2a can be used to predict the severity and mortality of the disease* (odds ratio of 7.8; 95 % CI: 1.3-45.1, p=0.0222)