Tripsinogen in urine

Trypsinogen, trypsinogen activating peptide (TAP) and carboxypeptidase activating peptide (CAPAP)

Trypsinogen (inactive form, trypsin proenzyme) is produced by acinous pancreatic cells in two isoforms - trypsinogen-1 (cathodic isoenzyme, CT) and trypsinogen-2 (anodic isoenzyme, AT). The inflammatory process in acute pancreatitis leads to an increase in circulating levels and trypsinogen-2 can be detected in both serum and urine.Premature activation of trypsinogen in pancreatic tissue leads to activation of the activation cascade and thus to autodigestion. This is an important pathogenetic factor of acute pancreatitis. In the laboratory both immunoreactive forms of trypsinogen (irAT, irCT) and their ratio in serum S-irAT / S-irCT or in urine U-irAT / U-irCT can be determined.

Clinic

Clinically, urinary **trypsinogen-2** levels are the most commonly used, with values of **5600–10,000 µg / l** corresponding to severe, severe acute pancreatitis, and values of **130–890 µg / l** for moderate to mild AP. In urine, we also determine the product of conversion of trypsinogen to active trypsin - trypsinogen activating peptide - TAP. Clinically significant is the increased level of TAP to assess the severity of acute pancreatitis, where urinary TAP values **above 15 nmol / l** detect moderate pancreatitis, values **above 40 nmol / l** severe disease. Recent studies have focused on the determination of the activating peptide procarboxypeptidase B in serum or urine. The activating peptide CAPAP is longer than other peptides released during the activation of pancreatic proenzymes, this is why it is more stable and more suitable for laboratory diagnostics. The normal serum CAPAP level by RIA is **0.8 nmol / l.**

Links

Source

- se svolením autora převzato z KOCNA, Petr. *GastroLab : MiniEncyklopedie laboratorních metod v gastroenterologii* [online]. ©2002. Poslední revize 2011-01-08, [cit. 2011-03-04]. <http://www1.lf1.cuni.cz/~kocna/glab/glency1.htm> (http://www1.lf1.cuni.cz/~kocna/glab/glency1.htm)

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