

Chymotrypsin in faeces

Template:Zkontrolováno thumb|Stanovení chymotrypsinu ve stolici **Chymotrypsin** – serine protease, EC 3.4.21.1, has a very similar molecular structure as trypsin a elastase. It is secerized as an inactive proenzyme – chymotrypsinogen, that is activated by trypsin.

Laboratory determination of chymotrypsin in faeces is based on a simple reaction with chromogenic substrate, N-succinyl-Ala-Ala-Pro-Phe-*p*-nitroanilide. Chymotrypsin catalyzes hydrolysis and release of colored 4-nitroanillin, which is determined photometrically at 405 nm. The reference values are > 140 nkat/g, the boundary zone is between 70 and 140 nkat/g, pathological values < 70 nkat/g (values are for determination at 30 °C). The disadvantages of the chromogenic method are solved by an ELISA immunochemical test performed with a polyclonal antibody of protein detection. The normal ELISA test values are above 6,4 µg/ml.

Clinical significance. The determination of chymotrypsin in faeces by this chromogenic method is simple, but the specificity and sensitivity of the determination is relatively low – 67% for severe pancreatic function disorders, only 39% for light and medium forms. The result of the test can be false positive due to the microbial flora of the Large intestine, false negativity can be caused by intraluminal degradation of the chymotrypsin molecule or dilution (water content) in diarrhea. The test is still used and recommended e.g. for monitoring substitution therapy with pancreatic enzymes in chronic pancreatitis

Odkazy

Zdroj

- Se svolením autora převzato z

Reference

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Kategorie:Gastroenterologie