

PATHOGENETIC RELATIONSHIPS BETWEEN METABOLIC DISORDERS
IN PATIENTS WITH COMBINED COURSE OF TYPE 2 DIABETES
MELLITUS AND CHRONIC PANCREATITIS

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In modern science, metabolic infringements that occur primarily in patients with metabolic syndrome, which consist, first of all, of dyslipidemia and type 2 diabetes mellitus (DM2) play an important role in the development of chronic pancreatitis (CP).

The aim of the present study was to investigate relationships between anthropometric data, disorders of carbohydrate exchange and functional state of pancreas in patients with combined course of DM2 and CP.

The study was performed on 88 patients (35 males, 53 females aged 32-65) with DM2 and CP; control group (n=20). The survey plan included: echosonography, elastase-1 in feces, α -amilase, indicators of carbohydrate exchange (insulin, glucose, HbA₁C, HOMA-IR).

Results. BMI in patients was higher than in control group (30.1 ± 1.9 vs 22.6 ± 1.8 kg/m², $p < 0,05$). In patients with DM2 and CP abdominal ultrasound revealed pancreas hyperechogenicity and heteroechogenicity. Grade 2 and 3 obesity was dominated in patients (44.3%; 37.2% respectively). Level of HbA₁C in patients was significantly elevated compare to control: 7.5 ± 0.3 vs 6.0 ± 0.2 %, $p < 0,05$. HOMA-IR in patients was significantly increased compare to control (4.5 ± 1.8 vs 1.0 ± 1.2 , $p < 0,05$) and had correlation with BMI ($r = 0,39$; $p < 0,001$). Level of α -amilase in patients was significantly higher compare to control: 60.1 ± 10.2 vs 30.4 ± 7.4 U/l, $p < 0,05$. Level of elastase-1 in patients was significantly lower compare to control (100.3 ± 23.8 vs 200.5 ± 10.4 , $p < 0,05$). There were correlation between elastase-1 and BMI ($r = -0.27$, $p < 0,05$) and HOMA-IR ($r = -0.21$, $p < 0,05$).

Conclusion. Combination of DM2 and CP is associated with increased activity of data of carbohydrate exchange and signs of exocrine pancreatic insufficiency.