



INDICATORS OF THE ANTIOXIDANT SYSTEM IN PATIENTS WITH CHRONIC PANCREATITIS DEPENDING ON THE DURATION OF ALCOHOL CONSUMPTION

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Introduction. Numerous studies have shown the susceptibility of pancreatic tissue to alcohol consumption, exerted by various mechanisms, including the induction of oxidative stress.

Keywords: chronic pancreatitis, oxidative stress, antioxidant system

Purpose: Evaluation of antioxidant system indices in patients with chronic pancreatitis according to the duration of alcohol consumption.

Material and methods: The study included 100 patients with chronic pancreatitis, men/women -55%/ /45%, mean age - 47 ± 0.93 years (19-59 years). Clinical and paraclinical changes specific to chronic pancreatitis were evaluated according to the recommendations of the European Society of Gastroenterology. Informed agreement was obtained from all patients. Indicators of the antioxidant system (ODS) assessed in venous blood: Total Antioxidant Activity (AAT) - in the hexane (hexane) and isopropanol (isopr.) phases, Superoxidismutase (SOD), Catalase, Glutadionreductase (GR).

Results: Alcohol consumption was confirmed in 55 patients: in 3 patients ≤ 10 years, in 16 - 10-20 years, in 27 - 20-30 years, in 9 >30 years. Increasing the duration of alcohol use from ≤ 10 years to > 30 years was identified: decrease in SOD activity (c/u) from 1395.45 ± 47.51 to 1141.10 ± 61 , $F=3.51$, $p<0.05$, Catalase ($\mu\text{M} / \text{s.l}$) from 9.84 ± 0.24 to 7.95 ± 1.07 , $F=4.51$, $p<0.05$; AAT-hexan. (mMDPPH/l) from 8.62 ± 0.82 to 6.80 ± 0.49 , $F=3.53$, $p<0.05$ (tab.1)

Tab. 1. Indices of the antioxidant system in patients with chronic pancreatitis according to the duration of alcohol consumption

Evaluated index	Duration of alcohol consumption, years / n. of patients					F	p
	absent/ n.=45	≤ 10 years /n.=3	10-20 years/ n.=16	20-30 years/n.=27	>30 years/n.=9		
AAT-hexan., mMDPPH/l	M \pm ES 9,78 \pm 0,21	M \pm ES 9,92 \pm 0,82	M \pm ES 7,18 \pm 0,46	M \pm ES 7,21 \pm 0,47	M \pm ES 6,80 \pm 0,49	3,53	<0,05
AAT-izopr., mMDPPH/l	9,85 \pm 0,26	8,79 \pm 1,25	7,38 \pm 0,61	6,24 \pm 0,36	6,68 \pm 0,62	2,69	>0,05
SOD, c/u	1306,01 \pm 26,12	1395,45 \pm 47,51	1246,50 \pm 30,32	1207,62 \pm 36,90	1141,10 \pm 70,61	3,51	<0,05
Catalaze, $\mu\text{M}/\text{s.l}$	9,59 \pm 0,57	9,84 \pm 0,24	7,83 \pm 0,56	8,98 \pm 0,45	7,95 \pm 1,07	4,51	<0,05
GR, $\mu\text{M}/\text{s.l}$	4,34 \pm 0,13	5,24 \pm 0,58	4,21 \pm 0,21	3,88 \pm 0,18	4,25 \pm 0,20	3,25	>0,05

Conclusion: Prolonged alcohol consumption affects the pancreatic tissue through various mechanisms, as a result there is an induction of oxidative stress, manifested by decreased activity of antioxidant system indices.