

1. Wiad Lek. 2009;62(2):87-92.

[Activity of GSH-dependent enzymes in blood serum of patients with acute and chronic pancreatitis]

[Article in Polish]

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Abstract

INTRODUCTION: Since one of the many proposed factors in the pathogenesis of acute and chronic pancreatitis is oxidative stress, the aim of the research was evaluation of antioxidant defense mechanisms, with particular emphasis on the role of reduced glutathione and GSH-dependent enzymes.

MATERIAL AND METHODS: The study involved a group of 35 patients with pancreatitis treated at the Clinic of General Surgery and Transplantation Medical University of Warsaw in the period from 2005 to 2007. This group consisted of 20 patients with mild symptoms (edema) of the form of acute pancreatitis and 15 patients with chronic pancreatitis, short duration of the disease. In all patients with acute and chronic pancreatitis qualified for the study were measured in serum markers of oxidative stress: concentrations of reactive thiobarbituric acid (TBARS), which determines the level of lipid peroxidation and reduced levels of glutathione (GSH) and activity of antioxidant enzymes: total glutathione peroxidase (cal. GSHPx), glutathione S-transferase (GST) and glutathione reductase (GSHR).

RESULTS: We found increased lipid peroxidation level, decreased level of GSH, and changes in activity of GSH-dependent enzymes in blood serum of patients with acute and chronic pancreatitis, compared to blood serum from healthy persons.

CONCLUSIONS: Obtained results indicate participation of oxidative stress in pathogenesis of those diseases, and systemic impairment of antioxidative mechanisms.

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