

Abstract Type : Poster

Abstract Submission No. : PO-1264

CHANGES IN GLUTATHIONOPEROXIDASE ACTIVITY IN RAT KIDNEY WITH DIABETIC NEPHROPATHY

Komiljon Zakirov¹, Zafar Rajabov², Burkhon Sharipov¹, Madina Makhkamova¹

¹Department of Internal Medicine, Tashkent Medical Academy, Uzbekistan

²Department of Abdominal Internal Surgery, Republican Specialized Center of Surgery named after academician V. Vakhidov, Uzbekistan

Objectives: One of the urgent problems of modern medicine is the rapidly increasing incidence of diabetic nephropathy. Metabolic disorders that occur with kidney diseases, as a rule, are accompanied by the production of free radicals, which stimulate the formation of lipid peroxide substances, which is increase the rate of destabilization of cell membranes. The enzyme glutathione peroxidase catalyzes the neutralization of hydrogen peroxide and lipid hydroperoxides formed in biological membranes under the influence of activated oxygen metabolites.

The aim of the study was to determine the activity of glutathione peroxidase in rat kidneys under conditions of diabetic nephropathy.

Methods: Materials and methods. The study was performed on outbred male rats weighing 160-180 g. Nephropathy was modeled by the administration of 10 mg / kg glycerol to rats with alloxan diabetes. Statistical data processing was carried out according to the Wilcoxon criterion.

Results: The results were considered reliable at $p < 0.05$. The activity of glutathione peroxidase in the cortical substance of rat kidneys with experimental nephropathy decreased by half compared to similar indicators in the control group.

Conclusions: Conclusion. The established change in enzyme activity indicates a violation of the intracellular redox potential and may be due to an insufficient amount of reduced NADPH against the background of an increasing number of free radicals formed in the kidneys during nephropathy.