

ABSTRACT

ISCHEMIA REPERFUSION EFFECT ON LEVELS OF SERUM AUTOANTIBODI HEAT SHOCK PROTEIN 27 (Hsp27) ON WISTAR RATS

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Purpose: To analyze serum immunoreactivity to Hsp27 autoantibody on Wistar rats 14 days after intraocular ischemia reperfusion.

Methods: This is an experimental study on 40 healthy male Wistar rats weighing between 2.5 – 3 kgs, separated into two groups, group 1 with 20 Wistar rats as control group and group 2 with 20 Wistar rats were exposed to transient intraocular ischemia by elevating intraocular pressure to 110 mmHg - 130 mmHg for 60 minutes. 14 Days after intraocular ischemia reperfusion all groups was sacrificed by cardiac puncture and blood samples collected were used for Hsp27 autoantibody detection. Hsp27 autoantibody reactivity was examined using Spectrophotometry. The data was collected and analyzed statistically using Mann-Whitney test.

Result: Serum immunoreactivity to Hsp27 Autoantibody in control group was 1.255 ng/ml and in treatment group was 2.095 ng/ml. Serum Hsp27 autoantibody was statistically higher in treatment group than those in control group with $p = 0.015$ ($p < 0.05$).

Conclusion: Ischemia reperfusion induced by acute intraocular pressure elevation led to complex changes in autoantibody reactivities in sera of treated rats. Dysregulation of the immune system causing increase level of serum Hsp27 autoantibody that could be an indicator for the loss of tissue protection through ischemia reperfusion damage.

Keywords: Hsp27 autoantibody, immunoreactivity, ischemia reperfusion