

PW01-189 - CORRELATION BETWEEN SERUM LEVELS OF NITRIC OXIDE AND BILIRUBIN IN PATIENTS WITH SCHIZOPHRENIA: PRELIMINARY RESULTS

A. Memic¹, J. Huskic², L. Kapur³, A. Kucukalic¹, L. Oruc¹

¹Department of Psychiatry, Clinical Center University of Sarajevo, ²Institute of Physiology and Biochemistry, School of Medicine, ³Laboratory for Human Genetics Institute for Genetic Engineering and Biotechnology, Genetics Institute, Sarajevo, Bosnia-Herzegovina

Objectives: There is a growing evidence that oxidative injury contributes to the pathophysiology of schizophrenia (Sch), where higher concentrations of nitric oxide (NO) found to be neurotoxic. Data also suggest that bilirubin (BR) can serve as an endogenous scavenger of NO. The aim of this pilot study was to compare the serum levels of BR and NO among patients suffering from Sch, as well as to estimate whether NO serum levels differ between patients and healthy controls.

Methods: The study population were consisted of inpatients (n=20) who met DSM-IV diagnostic criteria for Sch confirmed by Structured Clinical Interview (SCID 1) and healthy controls (n=20). In order to exclude psychiatric morbidity in control subjects the same diagnostic procedure was applied. Serum BR levels were measured by the method of Ehrlich. NO concentration in serum was determined by classic colorimetric Griess reaction

Results: In patients with schizophrenia BR serum level were 9.85 ± 1.182 mmol/L ; $X \pm SEM$. Serum NO level was significantly higher in patients with Sch ($23, 26 \pm 1, 76$ $\mu\text{mol/L}$; $X \pm SEM$) than in control subjects ($14, 36 \pm 1, 42$ $\mu\text{mol/L}$; $X \pm SEM$, $p=0.001$). Correlation between serum nitric oxide and BR values were 0.1518.

Conclusions: Results of this study reveal that BR plays possible protective role in NO cell toxic activity. Our finding of increased serum NO levels in patients with Sch indicates its potential role in pathophysiology of this severe psychiatric disorder. However, those results are preliminary and have to be confirmed in sample of larger size.