Evaluation of TGF β1, IL-8 and Nitric Oxide in the Serum of Diffuse Axonal Injury Patients and Its Association with Clinical Status and Outcome.


Source
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Abstract
AIM:
The aim was to evaluate the level of interleukin 8 (IL-8), transforming growth factor β1 (TGF β1) and Nitric oxide (NO) in diffuse axonal injury (DAI) and its association to the outcome and clinical status. MATERIAL and METHODS:
This cross-sectional study was conducted on 20 patients with DAI and 20 patients with multiple traumas without head injury and 20 healthy subjects as controls. Blood levels of IL-8, TGF β1 and nitric oxide in the 1st, 2nd, 3rd and 7th days of injury were measured. Glasgow coma scale (GCS) of patients was recorded. The patients' outcome was evaluated by Glasgow Outcome Scale (GOS).

RESULTS:
The level of TGF β1 was increasing during the admission and had the maximum level at the 7th day. In the DAI group, there was significant correlation between GOS score and serum IL-8 at 7th day of admission (r=-0.68, p= 0.002). In this group the GCS was found to be significantly correlated with the IL-8 concentration at 7th day of admission (p= 0.026, r=-0.55).

CONCLUSION:
IL-8 has negative correlation with GCS and GOS. TGF β1 could protect the brain from cytotoxics, hypoxia and acidosis so its level comes down in brain injuries as a result of its overuse.

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