Detection of the Severity of Brain Injury in Head Trauma Patients Using Biochemical Blood Markers and Its Correlation with Glasgow Coma Scale

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Abstract:

Abstract Head trauma is one of common injury related mortality and morbidity. Blood biomarkers are valuable tools for the identification and characterization of initial injury and secondary pathological processes for traumatic brain injury (TBI). This study evaluated the performance of a recently developed visfatin and its correlation with other blood circulating biomarkers that reflect specific pathological mechanisms including neuro inflammatory, neuron injury and oxidative damage in moderate to severe TBI patients. Peripheral blood was taken from TBI patients (n = 78) at hospital admission, maximum 6 hours post-injury. Severity and neurological outcome were assessed using the Glasgow Coma Scale (GCS) and blood level of: visfatin, neuron specific enolase (NSE), malondialdehyde (MDA), superoxide dismutase (SOD) and glutathione (GSH). Concentrations of visfatin (28 ± 1.68 μg/L, 25 ± 2.09 μg/L) was significantly higher (p

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