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PROGNOSTIC VALUES OF PERIPHERAL GLUTAMATE AND TNF-α LEVELS IN PATIENTS WITH INTRACEREBRAL HAEMORRHAGE

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Intracerebral hemorrhage (ICH), a detrimental disease, is associated with one month fatality in 40% of patients and worst neurological outcome among survivors. In the past several years, emerging evidence suggests that inflammatory and excitotoxic mechanisms are in the core of the pathophysiological processes, leading to neurological deterioration and secondary brain injury after ICH, thus being tied up to the patient's outcome. Following ICH, tumor necrosis factor-α (TNF-α) signalling exerts an acute detrimental role, being also argued as the main driver for increase in the blood brain barrier permeability and formation of the perihematomal edema. Elevated perihematomal glutamateinduced excitotoxicity have also been associated with the blood brain barrier disruption and neuronal death, severely affecting patient prognosis. In this lecture, we discuss the results from our working group which support the idea that peripheral TNF-α and glutamate levels can reflect CNS inflammation and excitotoxicity following ICH, as well as their utility as biomarkers for prognostication and clinical decision making between conservative or surgical treatment in patients with ICH.

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