

## **CEREBROLYSIN IN TBI: A PILOT STUDY OF A NEUROTROPIC AND NEUROGENIC AGENT IN THE TREATMENT OF ACUTE TRAUMATIC BRAIN INJURY**

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Numerous in vitro studies have documented the neuroprotective, neurotrophic and neurogenetic properties of Cerebrolysin. Cerebrolysin is a standardised porcine-brain derived, stabilised, aqueous protein solution, various protein molecules of which can pass the blood-brain barrier. By the WHO TBI is defined as a world-wide, major, acute and chronic health problem, so agents which facilitate acute and chronic treatment are of outstanding interest. Therefore we conducted a double blind, placebo controlled; add on study of Cerebrolysin in the treatment of acute brain injury. The study was conducted in 5 centers comprising 44 patients, 22 in each group; as rating instruments the GCS, the CGI and the SKT (Syndrom-Kurztest) were used. Vital parameters and laboratory values were controlled. Cerebrolysin/placebo was applied as i.v. drip for 21 consecutive days. Statistical analysis of the differences between baseline and weekly ratings showed significant differences between Cerebrolysin and placebo, Cerebrolysin-patients improving more rapid and more pronounced, the duration coinciding with the time of application. Despite methodological problems inherent in the study of brain injured patients and the relatively small groups, the significance of our results is pertinent to two aspects of treatment: The applicability of a specific agent effective on brain-neuron metabolism and intracellular structures and the facilitation of remission, presumably by this action. This effect enables an earlier onset of rehabilitation thus a reduction in number of in-patient days. As stated, this study suffers from methodological flaws, but considering the magnitude of the problem and the preliminary results after the application of a well tolerated agent, further studies of this kind should be undertaken.

Keywords: TBI; neuroprotective, neurotrophic, neurogenetic agents; rehabilitation; Cerebrolysin; double-blind, placebo-controlled TBI-treatment study.