Current strategies of managing paroxysmal sympathetic hyperactivity in TBI

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PSH commonly occurs in about 15-33% of patients following severe head injury if associated with at DAI, Brain stem Injury, pre-admission hypoxia or in the younger age group. The management of PSH following severe Traumatic Brain Injury (TBI) remains problematic, primarily due to an inadequate understanding of the pathophysiology of the condition. PSH exerts a profound negative influence on the final outcome in affected individuals. The pathophysiological basis by recent evidences support two recent hypothesis: (1) Direct injury to the hypothalamus and (2) functional disconnection of the hypothalamus and diencephalon from rest of the CNS. PSH aggravates secondary brain injury by basically three mechanisms: Hyperthermia, rigidity and posturing and elevation of circulating catecholamines. DD includes-lethal catatonia, malignant hyperthermia, infection, serotonin syndrome, Delirium Tremens (DTs), dystonias, meningitis, neuroleptic malignant syndrome, pediatric sepsis, thyroid storm. Management includes physical therapy, occupational therapy and speech therapy. Drugs like alpha-adrenergic and beta-adrenergic blockers bromocriptine chlorpromazine, dantrolene morphine and propranolol are helpful. While the original theories inferred an epileptogenic source, there is greater support for disconnection theories.

Biography

Arun Oommen is the Consultant Neurosurgeon at VPS Lakeshore Global Lifecare, Kochi, India. After his Super Specialty Training and Fellowship Training in Neuroendoscopy, he has worked in various super specialty centers before joining VPS Lakeshore. He is an expert in handing various neurosurgical cases and has vast surgical experience in areas like neurooncology, neurotrauma and neurocritical care, neuronavigation, stereotaxic neurosurgery, neuroendoscopy and spine problems including spine instrumentation. He has numerous international publications to his credit in various indexed journals. He is the Editor cum Advisor of the MedCrave Online Journal of Neurology and Stroke, Editor of the Open Access Journal of Neurology and Neurosurgery and the Neurology and Neurotherapy Open Access Journal, and also peer Reviewer of numerous other journals. He is one of the foremost Neurosurgeons in India acquiring an MBA degree. His areas of interest are neurooncology, neuroendoscopy, neurotrauma and critical care, spine surgery including instrumentation.

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