

Paroxysmal Sympathetic Hypertension: An Underdiagnosed Entity or a Diagnostic Difficulty?

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Dear Editor,

We read with utmost interest the article titled “Paroxysmal Sympathetic Hyperactivity in Neurocritical Children: A Pilot Study” by Agrwal et al.¹ We appreciate the authors for their research work, but we would like to express our views about this.

Paroxysmal sympathetic hyperactivity (PSH) is a well-known entity following acute brain injury (ABI) and is associated with higher morbidity, prolonged hospitalization, higher healthcare costs, and poorer outcomes. The authors have used the definition used by Farias-Moeller et al.² to define PSH in the study population rather than the consensus definition. This includes reduced level of consciousness in the definition, which might not be related directly to PSH. Moreover, in the conditions of ABI due to meningitis, mild traumatic brain injury (TBI), etc., children might present with irritability rather than encephalopathy. Hence, we are interested in the rationale of use of encephalopathy and Glasgow coma score (GCS) cutoff for inclusion in the PSH criteria. Rather, we suggest studying the association between low GCS and the incidence of PSH as defined in other studies.³ Most of the literature on PSH following ABI describes the response secondary to loss of inhibition of excitation in the sympathetic nervous system. Guillain–Barré syndrome (GBS) is an inflammatory demyelinating polyradiculopathy and is well known to be associated with autonomic dysfunction secondary to demyelination of cardiac nerve fibers or inflammatory infiltration of the myocardium.⁴ Hence, the inclusion of GBS in the study population might not be appropriate. The secondary objectives of this study were association of PSH with requirement of ventilation, duration of pediatric intensive care unit (PICU) stay, and ventilation—that are in turn multifactorial. Diseases of peripheral neuropathies, GBS, occurrence of health care-associated infections (HAI), critical illness neuromyopathy, diaphragmatic palsy, etc., are some of the entities known to prolong mechanical ventilation. Hence, an adequately powered study, including multivariate analysis of these confounding factors, would help in studying the association between PSH and these morbidities.

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