



## Etiological Pattern of Movement Disorders in Children

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*To the Editor:* Movement disorders are characterized by impaired voluntary movement, the presence of involuntary movements, or both [1]. Determining the etiology is important for the specific treatment and prognostication. As there are limited Indian studies, we planned this study with the objective of establishing their underlying etiology. This observational study was conducted from January 2018 to June 2019. Children from 2 mo to 18 y of age with involuntary movements were included. History, clinical examination, video graphics of movements, and diagnostic workup were analyzed. The study was approved by the institutional ethics committee.

A total of 104 cases (male:female ratio, 50:50), with mean age of 4.3 y were analyzed. Etiologically, perinatal insult was the most common –29 (28%), followed by hereditary causes –26 (25%), infection or immune mediated –8 (8%), psychogenic or behavioral causes –8 (8%), and others –19 (18%) were noted. Among the perinatal insults, hypoxic ischemic encephalopathy (HIE) –19/104 (18.3%) followed by bilirubin-induced neurological dysfunction (BIND) –5/104 (4.8%) were seen. Rheumatic chorea was noted in 5/104 (4.9%) cases. Gratification reaction 5/8 (62.5%) and shuddering attacks 3/8 (37.5%) were noted in the psychogenic/behavioral causes. Of 19 children with others etiology, infantile tremor syndrome was the commonest ( $n = 16$ ).

Earlier literature showed rheumatic chorea as the most common cause of choreas reported by Goraya 6/19 (31.6%) [2], but in this study, it accounts for 5 (17.3%) cases, like Dale et al. 3/20 (15%) [3]. This may be attributed to better diagnosis and treatment of streptococcal

infections and improving living status. ITS accounts for 70% of tremors, like other Indian study 13/15 (86%) [2], whereas there was no case of ITS in the Australian study [3]. Psychogenic/behavioral causes (8%) are relatively less common in India compared to others 23% [3]. To conclude, perinatal insult still is the most common cause indicating the need for improved perinatal care. Infantile tremor syndrome also formed a significant cause, emphasizing the need for improvement of nutritional status. Psychogenic causes and rheumatic chorea are less common.

### Declarations

**Conflict of Interest** None.

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