



# Tongue and Hand Tremors in an Infant with Traumatic Brain Injury

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*To the Editor:* An 11-mo-old boy developed tongue and hand tremors that worsened with intentional movements after developing a diffuse axonal injury (DAI) due to a fall from height. Tremors were observed after 5 wk of injury. He was also hypotonic with hemiparesis on the right side. The tremors were coarse with large amplitude and irregular in nature. Tremors were observed at rest and increased with movement (Supplementary Video S1). MRI of the brain revealed areas of diffusion restriction in left cerebral hemisphere, corpus callosum, bilateral central tegmental tracts (CTT), and middle cerebellar peduncles (Supplementary Fig. S1). Palatal movements were not observed. Following a 6-mo observation period, there has been no cessation or escalation of the tremor, and it has exhibited a partial reaction to the administration of carbidopa-levodopa at a dosage of 12.5 mg thrice daily.

Guillain-Mollaret's triangle (GMT) lesions are useful in the clinical localization of tremors. The triangle comprises of the red nucleus in the midbrain, dentate nucleus of the cerebellum, and the inferior olivary nucleus in the medulla. Lesions involving dentato-rubro olivary pathways result in degeneration and pseudohypertrophy of the inferior olive termed as Hypertrophic Olivary Degeneration (HOD) [1].

GMT lesions can cause HOD which clinically manifests as Holmes tremors. HOD type 1 lesion involves CTT resulting in ipsilateral degeneration of the olive [2].

Holmes tremor is usually a slow frequency tremor of variable amplitude that combines a resting component and intentional component. It usually develops after a period of 4 wk to 2 y, following a lesion of midbrain, thalamus or sometimes cerebellum [3, 4].

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s12098-023-05004-x>.

## Declarations

**Conflict of Interest** None.

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