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TITLE

Reply to: Pregabalin responsive tongue and arm tremor after Guillain Barré Syndrome

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We thank Nóbrega et al for their interest in our article “Neuropathic tremor in Guillain Barre Syndrome”. [1] In their letter, Nóbrega et al highlight an important treatment option for neuropathic tremor following Guillain Barre Syndrome. [2] The clinical course and characteristics of tremor in their report are strikingly similar to our series of patients with neuropathic tremor after Guillain Barre Syndrome- being a fine, fast and jerky tremor predominantly in the upper limb. [1] While majority of our patients had dystonic posturing in the upper limb, the patient reported by Nóbrega et al, had prominent tongue tremor.

Out of the five patients in our series, one patient reported subjective benefit on tremor with propranolol and one did not respond. In other patients, tremor was not functionally disabling to warrant medical treatment. None of our patients received pregabalin. Prior studies have reported mixed results while using pregabalin in neuropathic tremor. Individual patients with Guillain Barre Syndrome or chronic inflammatory demyelinating neuropathy were reported to have good benefit on tremor with pregabalin. [3,4] However, in a cohort of 44 patients with neuropathic tremor associated with chronic inflammatory demyelinating neuropathy, pregabalin was used in two patients without benefit; whereas tremor improved with treatment of underlying neuropathy in some. [5]

From a pathophysiological viewpoint, these observations support the hypothesis for a central oscillator at the cerebellar level in neuropathic tremor, particularly that associated with inflammatory neuropathies. GABA is an important neurotransmitter, specifically involved in maintaining hyperpolarization and low firing rates in the cerebellar granule cells, which is key to maintaining high signal-to-noise ratio while processing sensory information in the cerebellum. [6] Pregabalin, a GABA structural analogue, inhibits voltage gated calcium channels mimicking the downstream actions of GABA on its receptors and likely increases the efficiency of sensory processing in the cerebellum in the context of neuropathic tremor.

From a clinical perspective, these reports add to the therapeutic options in neuropathic tremors- propranolol, pregabalin and gabapentin may be initial medications to be trialled, based on anecdotal experience. Of note, many patients may not have functionally disabling tremor and treatment may not be warranted. Further longitudinal, prospective studies are required to understand the natural history and therapeutic response in this unique disorder.

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Venugopalan YVishnu: 1B,3B

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ETHICAL COMPLIANCE STATEMENT

The authors confirm that the approval of an institutional review board and patient consent were not required for this work. We confirm that we have read the Journal's position on issues involved in ethical publication and affirm that this work is consistent with those guidelines.

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