Intention tremor

see Benedikt's syndrome

Lesions in cerebellar hemisphere may cause: ataxia of the extremities, dysmetria, intention tremor.

Intention tremor, also known as cerebellar tremor, is a dyskinetic disorder characterized by a broad, coarse, and low frequency (below 5 Hz) tremor. The amplitude of an intention tremor increases as an extremity approaches the endpoint of deliberate and visually guided movement (hence the name intention tremor). Intention tremor is usually perpendicular to the direction of movement. When experiencing an intention tremor, one often overshoots or undershoots their target, a condition known as dysmetria.

<html><iframe width="560" height="315" src="https://www.youtube.com/embed/kj06uJYGWOw" frameborder="0" allow="accelerometer; autoplay; encrypted-media; gyroscope; picture-in-picture" allowfullscreen></iframe> </html>

Intention tremor can be elicited by the finger-nose test. In normal patients, the movements between the physician's finger and patient's nose should be smooth, but adjustment is allowed according to the patient's upper limb power. This man has intention tremor and impaired finger-nose test on the right side, whilst the left side is normal.

Intention tremor is the result of dysfunction of the cerebellum, particularly on the same side as the tremor in the lateral zone, which controls visually guided movements. Depending on the location of cerebellar damage, these tremors can be either unilateral or bilateral.

A variety of causes have been discovered to date, including damage or degradation of the cerebellum due to neurodegenerative diseases, trauma, tumor, stroke, or toxicity. There is currently no established pharmacological treatment; however, some success has been seen using treatments designed for essential tremors.

The red nucleus is a important centre for the genesis of cerebellar tremor and thus a possible target for drug-refractory tremor. Future research must determine how neuromodulation of the red nucleus can best be implemented in patients with cerebellar degeneration ¹⁾.

1)

Lefranc M, Manto M, Merle P, Tir M, Montpellier D, Constant JM, Le Gars D, Macron JM, Krystkowiak P. Targeting the Red Nucleus for Cerebellar Tremor. Cerebellum. 2014 Jan 11. [Epub ahead of print] PubMed PMID: 24415178.

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