Holmes tremor associated with two different etiologies

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OBJECTIVES

Holmes tremor (HT) is a rare debilitating movement disorder characterized by low-frequency tremor at rest and during postural and intentional conditions. It is also called thalamic, midbrain or rubral tremor. It is usually caused by lesions of the midbrain and its connections, but can also be caused by posterior thalamic injury. The most common etiologies are cerebrovascular events, but several other causes have been reported. It usually develops with a delay of 1 to 24 months after the insult to the brain, probably refecting the neuroplasticity changes. We aimed to present two cases of Holmes tremor with two different etiologies including brain abscess and multiple sclerosis.

CASE REPORT

A 6-year-old girl, who was followed up with mild left hemiparesis due to brain abscess, was admitted to our unit with left arm tremor in the third month of brain abscess. Neurological examination exhibited mild left hemiparesis, and 4-5 Hz frequency tremor at rest and during intentional condition. Cranial MRI showed atrophy in the right thalamus, and resection cavity in the right frontal lobe. She was treated with clonazepam and trihexyphenidyl. A significant decrease was observed in the severity and frequency of tremor. The other patient is a 16-year-old boy followed up with the diagnosis of multiple sclerosis. He was admitted to our unit with right-sided tremor in the second month of diagnosis of multiple sclerosis. Neurological examination revealed slow proximal right-sided tremor and dystonic posturing of the left leg. Cranial MRI showed multiple hyperintense lesions on juxtacortical, cortical and periventricular areas, posterior limb of the internal capsule, and thalamus on T2 and FLAIR sequences. Tremor improved significantly within 2 months with copaxone and levodopa treatment.

CONCULSIONS

Holmes tremor has a diagnostic and therapeutic challenge in clinical practice and requires a complete neurological examination to recognize the characteristic phenomenology. Depending on the underlying causes, Holmes tremor often persists despite various combined therapies. However, the tremors of our cases responded well to pharmacological interventions.

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