

TREATMENT OF MOVEMENT DISORDERS: ULTRASOUND LESIONING HAS A WIDER ROLE IN TREATMENT OF MOVEMENT DISORDERS

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Patients with severe tremor due to essential tremor (ET) and Parkinson's disease (PD) benefit from lesioning of the ventral intermediate nucleus. Lesioning is effective but involves significant complications rate, mainly due to inaccuracy of targeting and ablation. Transcranial MRgFUS is a new non-invasive method of gradual lesioning using high intensity focused ultrasound waves to ablate the chosen target. The procedure is entirely non-invasive, under MRI monitoring of the target localization and temperature, gradually increasing the temperature until thermal ablation is achieved. So far there have been few reports of MRgFUS VIM thalamotomy of patients with PD. We will report on the results of PD patients treated at our center and worldwide who gained excellent tremor control with few adverse events. GPi and STN lesioning have also been attempted in PD with varying success. Our initial small cohort of PD patients showed promising results with MRgFUS VIM thalamotomy. Larger studies with sham controls and longer follow up periods should establish this innovative technique as an efficacious and safe non-invasive and non-pharmacological approach for the beneficial treatment of medication resistant moderate to severe tremor in PD.