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O-FUN-13 - MRI guided High Intensity Focused Ultrasound for the treatment of essential tremor and Parkinson's disease: clinical outcome and radiological findings of unilateral thalamotomy

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Resumen

Objectives: To report the preliminary clinical experience in our center (CINAC-HM Puerta del Sur) in the treatment of essential (ET) and Parkinson's disease (PD) tremor with MRI guided High-Intensity Focused Ultrasound (MRgHIFU).

Material and methods: Nine patients (8 ET, 1 PD) underwent unilateral thermal thalamotomies with MRgHIFU. Tremor severity was assessed with the Clinical Rating Scale for Tremor (CRST) in all ET patients at baseline, 1 week and 1 month after treatment. Two patients were followed up to six months. A visual analogue scale for the assessment of overall quality of life (ranging from 0 to 100% with higher scores indicating better perceived quality of life) was also given pretreatment and 1 month after procedure. The single PD patient was evaluated through tremor subitems of the motor UPDRS. Treatment-related adverse events were also registered.

Results: At last follow-up mean CRST scores for tremor corresponding to the treated hemibody reduced from 9.1 to 1 (mean reduction of 90%). Total CRST score showed an improvement from 65.1 to 27.1 (60%). The most frequent posttreatment adverse event was gait instability and ipsilateral limb ataxia (5 patients) which progressively improved in the follow-up, two patients reported mild bucal paresthesias that persisted 3 months after treatment. We will also present size lesion and anatomical location as well as anatomoclinical correlations.

Conclusions: This pilot study supports previous evidence showing that MRgHIFU is safe and effective for the treatment of ET and PD tremor and results in huge reduction of daily living disability. Larger and randomized trials are mandatory to confirm these findings.