

was collected. Paragangliomas were classified according to the Modified Fisch classification. Pre-surgical embolization images were reviewed.

### Result

Twenty-five patients were identified, with a mean age at diagnosis of  $60 \pm 14.1$  years old. According to the Modified Fisch classification, paragangliomas were class A (n=1), class B (n=6) and class C (n=16). Intracranial tumor extension (class D) was observed in 9 patients, with intradural extension in one-third of these cases. Twenty patients were treated surgically, 14 of which performed pre-surgical angiography. The number of arterial feeders varied between 1 and 5, arising mainly from the neurovascular trunk of the ascending pharyngeal artery and from the posterior auricular artery. Mean percentage of tumor devascularization (embolization percentage) was 80% ( $\pm 17.6$ ). Embolization percentage showed a strong inverse correlation with the number of arterial feeders ( $r=-0.75$ ;  $p=0.002$ ), with no relevant relation with the size of the lesion. Complete surgical excision at follow-up was achieved in 90% of the patients. Residual/relapsing paragangliomas were larger at presentation and showed more arterial feeders (both  $p<0.05$ ), but the embolization percentage did not differ from the non-relapsing ones.

### Discussion

Our case-series suggests that the number of arterial branches feeding the tumor and the initial size of the lesion are more associated with recurrence than the embolization percentage obtained pre-surgically.

### Conclusion

Paragangliomas of the temporal bone are slow growing but locally destructive lesions and the treatment goal is to obtain complete surgical excision. The number of arterial feeders and the initial size of the tumor may be important when predicting residual lesion or relapse after surgery.

### 2-P19

#### BILATERAL THALAMOTOMY IN PATIENT WITH ESSENTIAL TREMOR, BY MRgFUS: PRELIMINARY EXPERIENCE

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**Keywords:** thalamotomy, MRgFUS, Tremor, Essential Tremor

### Introduction

To present the case of a patient suffering from Essential Tremor subjected to bilateral thalamotomy by tcMRgFUS for bilateral treatment of tremor of the upper limbs.

### Method

63-year-old male patient suffering from Essential Tremor from about 8 years with bilateral symptoms of the upper limbs and resistant to drug therapy. The patient underwent 2 thalamotomy sessions, using tcMRgFUS, with treatment of the left Vim and - 2 years later - the right Vim. Periodic clinical and instrumental MRI checks were carried out, to assess the intensity of the tremor, the quality of life and the evolution of the thalamotomic lesions.

### Result

The first treatment (left Vim) determined an immediate control of the tremor of the upper right limb, stable and persistent up to 2 years after the treatment, without significant adverse effects. The follow-up MRI documented a progressive and regular evolution of the edema and the lesion. The second procedural thalamotomy (right Vim) was facilitated by the presence of the contralateral thalamotomy lesion, used as an anatomical landmark. Even in this case, the control of the tremor of the left upper limb was complete and immediate. The

clinical evaluation documented a stable and bilateral reduction of tremor (approximately 78.6%), at 24 hours, 1 month and 6 months.

### Discussion & Conclusion

our preliminary experience suggests the possibility of using the tcMRgFUS method for the bilateral treatment of tremor refractory to medical therapy. However, further studies are needed to evaluate any long-term complications related to bilateral thalamotomy, as well as the possibility of extending treatment to PD patients.

### 2-P20

#### COMPARISON OF INDIRECT ATLAS-BASED COORDINATES AND DIRECT TARGETING THROUGH DRTt (DENTATO-RUBRO-THALAMIC TRACT) DTI FOR MRgFUS THALAMOTOMY

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**Keywords:** MRgFUS thalamotomy, tractography of the dentato-rubro-thalamic tract, tremor

To evaluate the validity of the use of direct targeting by tractography of the dentato-rubro-thalamic tract (DRTt) compared to indirect targeting using atlas-based coordinates. We retrospectively evaluated 12 patients submitted to MRgFUS thalamotomy in which target shifts were performed during treatment for non-optimal clinical response. In each treatment we recorded the initial indirect coordinates (LL, AP, CC) and the coordinates where the clinical response (tremor reduction) was obtained. The coordinates of the DRTt were measured, after tractographic reconstructions, at the level of the thalamus. The mean indirect coordinates were 14.2 RL, 7.1 AP, 1.8CC. The coordinates of the clinical response were 13.8 RL, 6.8 AP, 1.5 CC. The average coordinates measured on the tractographic reconstructions were 13.7 RL, 6.9 AP, 1.4 CC. The target coordinates obtained by tractographic reconstruction of the DRTt showed greater agreement with the coordinates of the clinical response, compared to the indirect coordinates. These preliminary results should be corroborated by future prospective studies to validate the use of intraprocedural direct targeting during MRgFUS thalamotomy.

### 2-P21

#### INFLUENCE OF LOW HEMOGLOBIN LEVELS ON SHORT-TERM OUTCOME IN PATIENTS SUBMITTED TO MECHANICAL THROMBECTOMY

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**Keywords:** mechanical thrombectomy, stroke, hemoglobin, anemia

### Introduction

It is often seen low hemoglobin (Hb) level in patients admitted with acute stroke. It is known that anemia has a negative impact in multiple ischemic mechanisms, and has recently been identified as an independent risk factor for ischemic stroke, causing worse functional outcomes and increasing mortality. The author aimed to analyze the effects of low hemoglobin levels on admission of stroke patient undergoing mechanical thrombectomy (MT).