margin was not contained within the 95% confidence interval, establishing non-inferiority (p=0.013). Conclusions: This is the first prospective evaluation of an algorithm able to suggest stimulation parameters solely from the fMRI response to stimulation. It suggests equivalent outcomes may be achieved in 3 hours of fMRI scanning immediately after surgery compared to SoC requiring 6 or more in-person clinic visits throughout >1 year.

P.079

Relationships between anatomical features and outcome after stereotactic laser amygdalohippocampotomy

C Zajner (London)* A Taha (London) M Abbass (London) F Isbaine (Atlanta) N Laxpati (Atlanta) R Gross (Atlanta) J Lau (London)

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Background: Stereotactic laser amygdalohippocampotomy (SLAH) has recently been shown to be comparable to traditional temporal lobectomy procedures. The ideal extent and volume of laser ablations remains an area of investigation Methods: 65 patients treated with SLAH for MTS were considered in this retrospective study. Manual segmentations of ablations were created using post-procedure T1-MRI scans. Ablations were assessed in relation to whether they crossed the coronal plane of the superior lateral mesencephalic sulcus (LMS), the extent to which ablation crossed this landmark, and extent of ablation of the uncus. Analysis of was done with binary categorization of 12-month Engel classification score. Results: Distance of ablation posterior to the coronal plane of the LMS was not associated with better surgical outcome (Engel class 1: 6.32 ± 4.16 mm; Engel class 2-4: 7.93 ± 3.75mm; (p = 0.099)). Ratio of ablations extending posterior to the LMS was 0.82 (SD = .39) in Engel 1 patients, and 0.90 (SD = 0.3) in Engel 2-4 patients; (p = 0.370). Volume of ablation showed little correlation with outcome (Engel class 1: 6064 ± 2128 mm^3; Engel class 2-4: 5828 ± 3031 mm^3; (p=0.239)). Ablation of the uncus showed a strong association with better surgical outcome (Engel class 1: 0.71 (SD = 0.31); Engel 2-4: 0.37 (SD = 0.36); p <0.001). Conclusions: Contrary to current practice, extension of ablation posterior to the LMS did not demonstrate improved outcome.

NEURO-ONCOLOGY

P.081

Chordoma management with artificial intelligence: a scoping review of current applications and future prospects

E Guo (Calgary) L Boone (St. John's) H Shakil (Toronto) R Sanguinetti (Calgary)* M Gupta (Calgary) S Lama (Calgary) GR Sutherland (Calgary)

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Background: Chordomas are rare, malignant bone tumors that present significant challenges in management and treatment due to their complex anatomical locations and propensity for recurrence. Advancements in artificial intelligence (AI) and machine learning (ML) show promise in improving chordoma management. Methods: A comprehensive literature search was conducted following PRISMA guidelines across multiple databases, including MEDLINE, Cochrane, Embase, Scopus, and Web of Science. The search targeted articles related to AI and ML applications in clinical tasks associated with chordoma management. The selection process involved systematic screening, data extraction, and assessment of inter-rater variability. Results: The search yielded 1,006 records, with 18 included for analysis. Convolutional neural networks (CNNs) excelled in tumor volume estimation, with the state-of-the-art model achieving a Dice similarity score of 74.2%, sensitivity of 79.4%, and positive predictive value of 74.3%. Clustering algorithms were effective in prognostic evaluations. Bayesian models and logistic regression demonstrated robustness in diagnostics. Support vector machines (SVMs) were noted for their diagnostic precision. Conclusions: AI and ML algorithms, particularly CNNs, clustering algorithms, Bayesian models, logistic regression, and SVMs, show promise in improving chordoma management through enhanced imaging, diagnostics, and prognostics. Future research should focus on larger, externally validated datasets and explore underutilized techniques like multi-modal data integration.

P.082

Preoperative corticosteroids reduce diagnostic accuracy for primary central nervous system lymphoma biopsies: a meta-analysis

AD Rebchuk (Vancouver)* K Tosefsky (Vancouver) KC Martin (Vancouver) D Chen (Vancouver) S Yip (Vancouver) S Makarenko (Vancouver)

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Background: Primary central nervous system lymphoma (PCNSL) is highly sensitive to corticosteroid induced cell arrest, apoptosis and shrinkage. However, the precise impact of preoperative corticosteroid on accuracy of PCNSL diagnosis using tissue obtained from open or stereotactic biopsies remains debated. Methods: We conducted a systematic review and meta-analysis to determine the effect of preoperative corticosteroids on non-diagnostic biopsy rates for PCNSL in immunocompetent adults. Subgroup analyses explored whether non-diagnostic rates varied based on biopsy type. Results: Nineteen studies, comprising 1226 patients (55% male; mean age: 60.3 years), of which 679 (55.4%) received corticosteroids prior to biopsy were included. Overall, patients pretreated with corticosteroids were two times more likely to have a non-diagnostic biopsy compared to patients that were corticosteroid-naïve prior to biopsy (RR = 2.1 [95% CI: 1.1-4.1]). In the subgroup analysis limited to stereotactic biopsies, patient pretreated with corticosteroids were three times more likely to have a non-diagnostic biopsy (RR = 3.0 [95% CI: 1.2-7.5]). Whereas, in the open biopsy subgroup, there was no significant difference in non-diagnostic rates. Conclusions: Corticosteroids should be withheld, if clinically safe, prior to stereotactic biopsies in cases of suspected PCNSL. If corticosteroids are administered preoperatively, an open biopsy should be considered instead of stereotactic biopsy.