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NF5-14. INTERCEPCIÓN TRATAMIENTO STRATEGY FOR INCIDENTAL LESIONS IN CHILDREN, ADOLESCENTS AND YOUNG ADULTS (AYA) USING LASER INTERSTITIAL THERMAL THERAPY (LITT)
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BACKGROUND: Due to widespread availability and lower threshold for neuroimaging, incidental brain lesions have increased. When a high index of suspicion exists for a neoplastic process, early treatment might be beneficial. This is appealing in cases of tumor predilection such as cancer predisposition syndromes or history of therapeutic irradiation. LITT may provide a means for total tumor extirpation in these otherwise surgically inaccessible lesions and intercept eventual anatomic or pathologic evolution. The aim of this study is to evaluate our evolving experience based on an early and minimally invasive strategy using LITT. METHODS: Prospective review of pediatric and AYA patients in whom incidentally discovered lesions were treated with simultaneous stereotactic biopsy and LITT. Demographic data, presenting symptoms, adverse events and outcomes are reviewed. RESULTS: Mean age for 9 patients is 11.8 years. 4 patients had tumor predilection: 2 with familial tumor predisposition syndrome and 2 history of cranial-sirradiation. In 4 patients imaging was performed for surveillance of other brain tumor or focal cortical dysplasia. 3 patients had imaging for headache. Mean time from initial finding to treatment was 29.7 months. Recommendation to proceed with treatment was due to interval growth, concerning features (contrast-enhancement), or high potential for malignant transformation. 1 patient had facial weakness and 1 patient had visual field deficit that resolved. Pathological diagnoses revealed low-grade tumor in 4 patients and non-diagnostic pathology in 5. No patients received additional tumor-directed therapy during a mean follow-up of 14.7 months. There was no evidence of tumor recurrence in any patient. CONCLUSION: An early therapeutic strategy aimed at tumor interception is feasible in pediatric and AYA patients for incidental lesions. Early results might influence the design of future strategies for simultaneous or sequential diagnostic and thermal therapy. Evolving tumor control rates support the therapeutic potential of LITT in central, surgically-inaccessible incidental tumors.