ABSTRACT

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Adult H3K27M mutated thalamic glioma patients display a better prognosis than unmutated patients.

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BACKGROUND: Adult thalamic gliomas are a rare entity whose management is challenging for physicians. The aim of this study is to describe the characteristics and prognostic factors of thalamic gliomas in adult patients.
METHODS: We retrospectively analyzed the clinical, neuro-radiological, histological, and molecular characteristics of all cases of adult thalamic glioma in our regional center.
RESULTS: We included 38 adult patients. Median age at diagnosis was 56.5 years old (range, 24-80). Median KPS at diagnosis was 70%. Two-thirds of patients presented with tumor necrosis on MRI. Bithalamic lesions were present in four patients. The median volume of enhancement associated with lesions was relatively small (14 mm3). Two patients had undergone partial surgical resection. All other patients underwent biopsy. Median PFS was 7.1 months (95% CI [3.7-10.5]) and median OS was 15.6 months (95% CI [11.7-19.6]). Among 20 patients with available tumor samples for molecular analyses, only 4 (20%) presented with H3K27M mutation. Patients with H3K27M mutation had longer survival compared to those without. Finally, we identified a long-term survivor population characterized by a younger age, no cognitive impairment, low steroid dose treatment and the presence of H3K27M mutation.
CONCLUSION: Thalamic adult glioma differs from bithalamic glioma in children with regards to its clinical, radiological and molecular profiles. Long-term survival is observed in young patients with limited symptoms and H3K27M mutation. A larger prospective cohort is needed to validate these findings.

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