ED-28. EFFECT OF VALPROIC ACID EXPOSURE ON SURVIVAL IN LOW-GRADE GLIOMA PATIENTS: A RETROSPECTIVE ANALYSIS
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BACKGROUND: Recent years have seen growing interest in histone deacetylase inhibitors (HDACi) in the treatment of various cancers, including gliomas. Valproic acid (VPA), a well-known anticonvulsant, is an HDACi and has been shown to increase sensitivity of tumour cells to multiple agents in vitro and in vivo. Retrospective work in glioblastoma has suggested an overall survival (OS) benefit for patients taking VPA. We performed a retrospective analysis of low-grade glioma (LGG) diagnoses in Manitoba, Canada and prescription histories to determine whether VPA improved survival. METHODS: The Manitoba Cancer Registry was searched for all cases of glioma diagnosis dating back to 1996. We included all patients with LGG aged 18 or older. Patients were considered to have LGG if they had histological confirmation, or had neuroimaging > 1 year prior to the first surgery date with a higher grade histology. Date of diagnosis was set as the date of first neuroimaging. The Drug Program Information Network database was searched for anticonvulsant prescriptions received by patients identified. Variables tested were use of VPA (with or without other anticonvulsants), use of anticonvulsants excluding VPA, and no use of any anticonvulsants. RESULTS: We identified 321 patients, 37 (12%) of whom were on VPA, 138 (43%) of whom were on other anticonvulsants excluding VPA, and 146 (45%) of whom were without anticonvulsants. Preliminary analysis reveals a 6.9 years median OS for patients taking VPA, compared to 3.1 years for those taking other anticonvulsants and 0.6 years for those taking no anticonvulsants. CONCLUSIONS: This retrospective analysis suggests that VPA lengthens OS in patients with LGG. Multivariable analysis will further evaluate this potential difference. One limitation is the inclusion of rapidly progressive lesions in the median OS analysis, despite their known poor prognosis. Further prospective work is warranted to study the utility of VPA in improving OS.