SO-02. ADULT SPINAL CORD ASTROCYTOMAS: CLINICAL AND MOLECULAR CHARACTERISTICS
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BACKGROUND: Intramedullary spinal cord astrocytomas are a rare form of glioma making evaluation of clinical and prognostic factors difficult. The clinical and molecular characteristics, prognosis, and propensity toward leptomeningeal dissemination of this disease in adults has not been determined with precision. METHODS: We conducted a retrospective analysis of adult patients at Memorial Sloan-Kettering Cancer Center with histologically proven spinal cord astrocytoma diagnosed and treated between 1997 and 2013. We assessed gender, age at diagnosis, clinical presentation, MRI characteristics including presence of enhancement and longitudinal extent of disease, treatment, and occurrence of leptomeningeal metastasis. RESULTS: Eleven patients (6 men, 5 women) were identified with histologically proven astrocytoma with complete clinical information. The histologies were of varying grades (grade II - 3, grade III - 5, grade IV - 3). Median age was 45 (range 23 to 74 years). Presenting symptoms included weakness (9/11), sensory changes (9/11), urinary symptoms (5/11), and back pain (5/11). Four out of 11 patients underwent subtotal resection, with the remaining 7/11 undergoing biopsy. Eight out of 11 patients underwent RT as initial treatment, of whom 7 received concurrent temozolomide. In total, 6/11 received bevacizumab as salvage therapy. Five out of 11 patients developed leptomeningeal metastases, of whom 2 had previously undergone subtotal resection. Median survival time was 37 months. One out of 11 patients was molecularly profiled: and was found to be unmethylated at the MGMT promoter, EGF-R VIII mutation negative, and IDH1 mutation negative. CONCLUSION: Our cohort of adult spinal cord astrocytomas were frequently complicated by leptomeningeal metastases. Molecular characteristics in this group are poorly defined, and we plan to further characterize these tumors molecularly.