Basal ganglia glioma

Basal ganglia glioblastoma

The basal ganglia and thalamus are uncommon locations for infiltrating gliomas. Tumors here are usually treated with biopsy and adjuvant therapy with relatively poor results. Rarely do patients undergo extensive surgical intervention. It seems reasonable to suggest that successful cytoreduction may help these patients. However, this hypothesis has not been studied due to the general view that it is not possible to remove deep-seated brain tumors with acceptable outcomes.

Through retrospective data collection, Briggs et al., described a small case series undergoing awake contralateral, transcallosal approach surgery for deep-seated brain tumors affecting the basal ganglia. They described the patient cohort, report on patient outcomes, and describe our surgical technique.

Four patients underwent awake contralateral, transcallosal surgery for glioblastoma invading the basal ganglia. All four patients demonstrated hemibody weakness contralateral to the side of their tumor, with three patients confined to wheelchairs at presentation. Ages ranged from 25-64 years. Tumor volumes ranged from 14-93 cm3. Greater than 50% resection of each tumor was achieved during surgery. In two cases, approximately 90% resection was achieved. Motor strength improved in one patient who presented with hemiplegia. Two patients required ventriculoperitoneal shunting for complications related to hydrocephalus. When writing this manuscript, two of our patients were still alive, functional, and free of tumor progression.

They presented results attempting to resect large gliomas infiltrating the basal ganglia in four patients. This technique combined a contralateral, transcallosal approach with awake neuromonitoring. The results suggest it is possible to remove these tumors with reasonable outcomes [1].

1)
Briggs RG, Nix CE, Conner AK, Palejwala AH, Smitherman AD, Teo C, Sughrue ME. An Awake, Contralateral, Transcallosal Approach for Deep-Seated Gliomas of the Basal Ganglia. World Neurosurg. 2019 Jul 10. pii: S1878-8750(19)31937-0. doi: 10.1016/j.wneu.2019.07.031. [Epub ahead of print] PubMed PMID: 31301441.