Gamma Knife Stereotactic Radiosurgery for Nonvestibular Cranial Nerve Schwannomas.

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BACKGROUND: Nonvestibular cranial schwannomas represent a rare type of benign intracranial tumor. Few studies have evaluated the use of stereotactic radiosurgery (SRS) as a primary management option for these lesions. We performed a retrospective review of our institution's experience focusing on efficacy with regard to tumor control and clinical symptom stabilization as well as treatment safety.

METHODS: Patients were included if they underwent at least 1 SRS procedure for a nonvestibular schwannoma and had at least 6 months of available imaging follow-up. Demographic, SRS dose planning, clinical, and imaging data were collected from chart reviews of treated patients. χ² and Kaplan-Meier analyses were performed.

RESULTS: Between 2004 and 2016, 35 schwannomas were treated in 34 patients. Median follow-up was 48 months. Median age at time of treatment was 51 years. Three patients had neurofibromatosis 2. Schwannoma location was trigeminal (57%), facial (20%), jugular foramen (14%), abducens (6%), and trochlear (3%). Median margin dose delivered was 13 Gy. The 5-year and 10-year tumor control rates were 94.4% and 88.5%, respectively. Presenting clinical symptoms stabilized or improved in 79% of cases after radiosurgery, and new or worsening symptoms were seen in 21%.

CONCLUSIONS: SRS is a safe and effective modality for treatment of nonvestibular cranial nerve schwannomas.

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