

Initial Observation of Vestibular Schwannomas: A Modern Institutional Experience

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Abstract

Objectives: Vestibular schwannomas are benign, slow growing, tumors that arise from the Schwann cells in the vestibulocochlear nerve. Although benign, these tumors can cause significant symptoms and the optimal initial treatment paradigm is controversial. In this study we review the outcomes of patients undergoing initial observation alone.

Methods: The clinical characteristics including presenting symptom (asymptomatic, hearing loss, imbalance, headache, other) of 360 consecutive patients with radiographically diagnosed vestibular schwannoma were reviewed by researchers at one institution for those who opted against any initial intervention. All the patients diagnosed after 1989 and the actuarial rates of tumor control, freedom from definitive therapy, and survival were calculated at last known follow up. Radiographic local control was determined by a neuroradiologist.

Results: Of the 360 patients seen, 243 opted for initial observation (67.5%). Median age at diagnosis was 59.9 years and median follow up time was 39.9 months from diagnosis. Of these observed patients, 118 (48.6%) were female and 125 (51.4%) were male. Hearing loss was the most common symptom at presentation of observed patients (55.1%). Local control at 1, 5, and 10 years was 92%, 70%, and 58%, respectively. The freedom from local therapy rate while under observation at 1, 5, 10 years were 91%, 74%, and 65%, respectively. Overall survival at 1, 5, and 10 years was 100%, 95%, and 95%, respectively. Patient gender, age, and initial presenting symptom did not impact the time to local failure after observation ($p = 0.13, 0.08, 0.64$, respectively).

Conclusions: Over half of patients with vestibular schwannoma who undergo initial observation at diagnosis will maintain local radiographic tumor control at 10 years. Although surgery and radiosurgery are common options for treating vestibular schwannomas, observation can still be considered in appropriate, minimally-symptomatic patients.

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