

Gamma Knife Radiosurgery for Non-vestibular Cranial Nerve Schwannomas

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Outcomes

Tumor control rate:

• 94.4% at 5 years

• 88.5% at 10 years

Introduction

Non-vestibular cranial nerve schwannomas represent a rare type of benign intracranial tumor. Few studies have evaluated the use of Gamma Knife stereotactic radiosurgery (SRS) as a primary treatment for these lesions. We report here a large series of patients with SRS-treated non-vestibular schwannomas with a focus on safety and efficacy.

Methods

We performed a retrospective study of patients who underwent SRS at our center for any type of nonvestibular schwannoma and for whom at least 6 months of radiological follow-up was available. The data collected included patient characteristics, clinical symptoms at time of treatment, treatment details, radiological response and clinical evolution and survival.

Cohort demographics

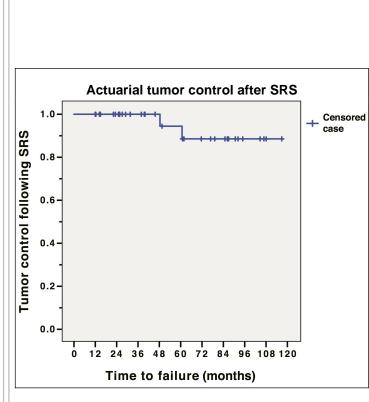
- 35 schwannomas treated in 34 patients
- Median follow-up: 48 months

Schwannoma location:

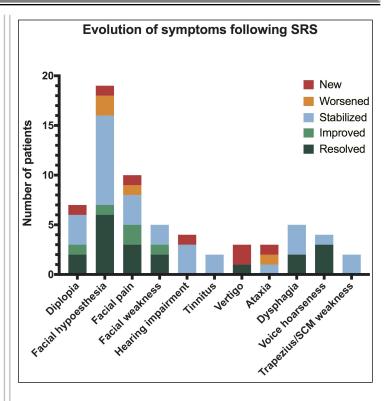
- Trigeminal: 57%
- Facial: 20%
- Jugular forament: 14%
- Abducens: 6%
- Trochlear: 3%

Treatment parameters:

• Median dose: 13 Gy at 50% isodose line



- No case of radionecrosis
- One case of cystic degeneration with symptomatic brainstem compressiong requiring surgery



Conclusions

SRS is a good modality for the treatment of nonvestibular cranial nerve schwannomas. When compared to the published literature, tumor control rates appear similar to those of vestibular schwannomas and the safety profile appears favorable compared to microsurgical resection.

Learning Objectives

- Discuss the management of non-vestibular schwannomas