

# **Understanding The Pathological Anatomy Of Arachnoid In Large And Giant Vestibular Schwannomas And Its Relevance To Facial Nerve Preservation: A Personal Experience Of 835 Cases**

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## **Objectives**

An understanding of the mechanism of formation of arachnoid fold around vestibular schwannoma is crucial in preserving the anatomical integrity of 7th nerve.

## **Methods**

The author, who has an operative experience of 835 cases of vestibular schwannomas over a period of nineteen years with an operative mortality of 1%, describes the technical pearls for preservation of facial nerve by video demonstration of the dissection techniques for large vestibular schwannoma. The essential initial step is peeling of the double layer of arachnoid from the posterior tumor surface. After reduction of the tumor volume, continued dissection of the arachnoid fold toward the brainstem can be achieved without opening the arachnoid over the fifth and lower cranial nerves, which are in separate cisterns. The key element in successful vestibular schwannoma is understanding that flattened facial and cochlear nerves do not have an arachnoid separating them from the tumor capsule which is essentially the perineurium of the vestibular nerve from which tumor has grown. If the tumor cannot be dissected from 7th nerve easily, a sub-perineural dissection is advised. Bipolar coagulation over the tumor surface is avoided. The intracanalicular component of the tumor is removed by doing tailored drilling of internal auditory canal. Result: The seventh nerve can be anatomically preserved even in large and vestibular schwannomas.

## **Conclusion**

Acoustic neurinoma surgeons should strive to keep anatomical integrity of 7th nerve even in large acoustic tumors and the edited videos of dissection techniques will be shown.