A case of Accessory nerve schwannoma mimicking hypoglossal nerve schwannoma The World Federa of Skull Base Socie 9TH WORL CONGRES



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Introduction

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- Schwannomas constitutes 8% of primary intracranial tumors, and 2% of these are considered to be jugular foramen schwannomas originating from the lower cranial nerves (IX, X, XI). Among them, accessory nerve schwannoma is very rare.
- > We experienced a case in which a patient was diagnosed with hypoglossal nerve schwannoma preoperatively, but was later diagnosed with accessory nerve schwannoma based on intraoperative findings, and we report this case.

<u>Illustrative case</u> 62yers old Female

Three years ago, she visited our hospital, because she had right-sided tongue deviation/atrophy and dysarthria, and a head MRI revealed a 17mm tumorous lesion on the dorsal side of the right internal carotid artery(ICA), connected to the right hypoglossal canal(HGC). A hypoglossal nerve schwannoma was suspected and surgical treatment was suggested, but the patient requested observation.

Three years later, she presented with dysphagia, hoarseness, and atrophy of the right trapezius muscle(TPM), and the tumor had grown to 30mm, therefore tumor removal was planned by opening the hypoglossal canal via a transcondylar approach.

At first visit

Preoperative



Postoperative





Pathological findings Spindle cell proliferation is observed. Palisading is observed.

S-100(+) MIB1 index5%

Neurological findings

Hoarseness Dysphagia Right-sided TPM atrophy Right-sided tongue deviation **Improved** Right-sided tongue atrophy Unchanged Dysarthria Improved

Improved Improved

Unchanged

Discussion		
	hypoglossal nerve schwannoma	Jugular foramen schwannoma
Symptoms	 Hypoglossal nerve palsy(tongue atrophy or tongue deviation) is present in 78.7-92% of cases^{7,8}. Lower cranial nerve disorder may occur depending on the extent of the tumor⁹. 	 Intrajugular type presents with jugular foramen syndrome (dysphagia, hearing loss, hoarseness, etc.)¹¹. Some reports have stated that hearing impairment is the most common symptom, while others have reported that hypoglossal nerve palsy is also present¹².
lmage	 If the CT bone image shows more expansion of the hypoglossal canal or destruction of the occipital condyle, it suggests hypoglossal nerve schwannoma¹⁰. Differentiation is difficult in large tumors, so diagnosis is made based on neurological symptoms¹⁰ 	 Clearly demarcated compressive bone destruction accompanied by enlargement of the jugular foramen^{10,13}.

It is difficult to differentiate between the two based on symptoms and images alone.

In this case

- Intraoperative findings showed that the tumor was located mainly within the JF.
- Intraoperative findings revealed tumor formation in the intracranial accessory nerve.
- The symptoms of hypoglossal nerve palsy(tongue deviation) improved after surgery. Retrospectively, the hypoglossal canal and the jugular foramen were enlarged.
- The diagnosis was accessory nerve schwannoma. Based on the initial symptoms, the patient was diagnosed with hypoglossal schwannoma before surgery, but retrospective images showed that a jugular foramen schwannoma should have also been
- considered in the differential diagnosis.





It may be difficult to distinguish between jugular foramen schwannoma and hypoglossal nerve schwannoma based on the initial symptoms, **Conclusion** so it is important to consider the differentiation between these two diseases based on detailed preoperative imaging studies and symptoms.

References

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