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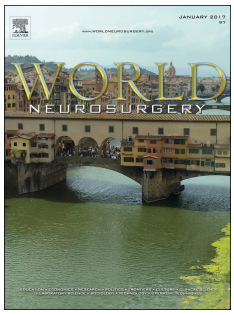

Schwannoma of the Fourth Ventricle: Report of two cases and Review of Literature

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Schwannoma of the Fourth Ventricle: Report of two cases and Review of Literature

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Abstract

Background: Schwannomas have been reported in several unusual intracranial locations. Herein, we report two extremely rare cases of schwannomas originating in the fourth ventricle, where it did not have any attachment to the surrounding structures. The clinical course, radiological and pathological features, treatment, and follow-up are described.

Case Description: The first patient was a 49-year-old man who presented with symptoms of paroxysmal dizziness and vomiting. Magnetic resonance imaging (MRI) showed a mixed solid-cystic mass occupying the inferior half of the fourth ventricle. Complete excision of the tumor was performed via midline suboccipital craniectomy. The histological diagnosis was intraventricular schwannoma. The second patient was an 18-year-old man with chronic vertigo and progressive gait unsteadiness. MRI revealed a heterogeneously enhancing lesion fully filling the fourth ventricle. A ventricular Ommaya tube placement was performed to relieve symptoms of hydrocephalus before tumor resection. A suboccipital craniotomy was performed to resect the lesion. Histopathological examination confirmed the diagnosis of schwannoma.

Conclusions: Fourth ventricular schwannomas are rare, but should be considered in the differential diagnosis of contrast-enhancing intraventricular tumors in both children and adults. Although their etiopathologic origin may be different from extra-axial schwannomas, their imaging, histology, and clinical course appear identical and should be managed similarly.

Key words： Schwannoma, Fourth ventricle, Intraventricular, Intra-axial schwannoma

Abbreviations and Acronyms:

Introduction

Schwannomas are most commonly encountered in extra-axial locations and arise from the myelin sheath of peripheral nerves, accounting for 8% of all intracranial tumors[1-7]. We report two extremely rare cases of schwannomas originating in the fourth ventricle where it did not have any attachment to the surrounding structures. Because Schwann cells do not cover the central nervous system, the etiology of intraventricular schwannomas is unclear[8, 9]. Here, we provide a review of the current literature focusing on this particular location for schwannoma occurrence and its proposed etiopathogenesis.

Case reports

The first patient was a 49-year-old man who presented to us with paroxysmal