Cerebellopontine angle hemangioblastoma

Cases of hemangioblastoma (HBM) in the cerebellopontine angle (CPA) have rarely been reported.

Diagnosis

Cerebellopontine angle hemangioblastoma diagnosis.

Differential Diagnosis

Both appear as hypointense on T1-weighted images (WI) and hyperintense on T2WI, and both have strong enhancement with gadolinium. Cystic appearance, involvement of the internal auditory canal, presence of dilated feeding arteries, or flow void due to the hypervascularity of the lesion may help as differentiating factors [1].

Treatment

Cerebellopontine angle hemangioblastoma treatment.

Case reports

A 63-year-old male with a complaint of progressive headache associated with imbalance and difficulty walking. Neurological examination showed discreet facial paresis, left dysmetria and mild gait ataxia. Magnetic resonance imaging (MRI) showed a solid mass with isointensity on T1-weighted sequences; Hypointensity and a heterogeneous appearance on T2-weighted sequences; and intense homogeneous contrast enhancement located in the left CPA region extending superiorly to the tentorial notch. The first diagnosis was meningioma, but during the microsurgical suboccipital retrosigmoid approach, it was observed that the lesion was extremely bloody with several vessels on its surface. They achieved gross total resection, and the pathology confirmed hemangioblastoma.

Although it is rare, cerebellopontine angle hemangioblastoma should be one of the differential diagnoses when dealing with solid cerebellopontine angle lesions with high contrast enhancement and heterogeneity on T2-weighted MRI. Analysis of the radiological characteristics allows a greater chance of confirmation and is one of the main tools for surgical planning [2].

A 31-year old male with a right ear hearing loss of 3 months duration. He did not experience earache or discharge before the hearing loss. He; however, experienced visual acuity and dizziness. General physical examination did not yield much.

Computed tomography and magnetic resonance imaging revealed a cystic-solid mass at right CPA.

We initial misdiagnosed the lesion as an acoustic neuroma with cystic changes. Immunohistochemistry studies revealed HMG.

The lesion was total surgical resection via the retro-sigmoid approach.

The patient's symptomatology resolved after the surgery. Two years follow-up show no recurrence of the lesion and the patient is well.

Identification of feeding arteries and electro-coagulating them during the operation minimized intraoperative bleeding. The tumor should usually be dissected out whole and not piece meal fashion. Pre-operative CTA is very useful in outlining the vasculature of the tumor [3].

A 70-yr-old female presented with a growing left CPA hemangioblastoma. The lesion had undergone a prior subtotal resection from a retrosigmoid approach and subsequent adjuvant radiation treatment. The patient had worsening left facial strength, progressive balance difficulty, and absent left auditory function. Preoperative angiogram demonstrated arterial blood supply from the left anterior inferior cerebellar artery (AICA) that was deemed unsafe for embolization due to significant arteriovenous shunting. A posterior petrosal transotic approach was performed in order to optimize the working angle to the anterior brainstem and afford the ability to occlude the vascular supply from AICA prior to surgical resection of the lesion.

The posterior petrosal transotic approach offers an improved surgical working angle to the anterior brainstem compared to the translabyrinthine approach. This advantage can be particularly important with vascular tumors that receive blood supply anteriorly, as in this case from AICA, and can improve the safety of the resection [4].

A 42-year-old man presenting with vertigo and diplopia found to have a CPA tumor with imaging resembling VS. He underwent retrosigmoidal resection of his tumor, which was found to be a hemangioblastoma [5].

Moon et al. presented a case of HBM in the CPA, in which complete resection was achieved without morbidity using the modified transcondylar fossa approach (TCFA) [6].

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Retracted articles

Retraction: Solid hemangioblastoma in the cerebellopontine angle: Importance of external carotid blood supply with regard to the probable site of origin and preoperative embolization

The article titled, “Solid hemangioblastoma in the cerebellopontine angle: Importance of external carotid blood supply with regard to the probable site of origin and preoperative embolization” published in pages S1-4, Supplement 1, vol. 7 of “Surgical Neurology International” is being retracted. It has been found that the article contains several data errors which interfere with the correct information that the article originally intends to bring out to the readers. Owing to high number of errors, including improperly used references, it was not possible to publish an errata and thus the article is being retracted on technical grounds.

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