# Cerebellopontine angle meningioma differential diagnosis

- Hybrid nerve sheath tumor of the spinal canal and neurofibromatosis-2, where the twain shall meet-a case report and review of literature
- The "Outline Sign": Thin Hyperenhancing Perimeter as an MR Imaging Feature of Meningioma. A Useful Tool in the Temporal Bone Region for Differentiating Meningiomas from Schwannomas and Paragangliomas
- Primary large B-cell lymphoma involving the cerebellopontine angle mimic acoustic schwannoma: Role of MR Spectroscopy in differential diagnosis. A case report
- Cerebellopontine angle meningioma in a patient presented as acute cerebrovascular accident
- Meningioma Originating From Choroid Plexus of Foramen of Luschka: A Rare Case Report and Tip of Differential Diagnosis
- Intracranial temporal bone angiomatoid fibrous histiocytoma: illustrative case
- Extra-axial adult cerebellopontine angle medulloblastoma: Revisiting a rare entity
- Magnetic Resonance Imaging of Unusual Neoplasms Related to Foramen of Luschka: A Review for Differential Diagnosis

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see also Cerebellopontine angle tumor differential diagnosis.

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Findings in 20 patients who underwent removal of a meningioma were compared to those in 131 patients who had an vestibular schwannoma removed during the same period. They found that in patients with meningiomas the tumors frequently are large at presentation, the otologic symptoms and audiometric findings are less dramatic.

In meningioma the characteristic finding is a broad-based mass aligned with the petrous ridge, not centered over the internal auditory canal [1)].

Dynamic contrast-enhanced perfusion MRI can potentially differentiate VS and CPA meningiomas. Meningiomas are reported to have very high mean regional cerebral blood volume ratios that are statistically different than schwannomas [2)].

Perfusion imaging has also been shown to differentiate between other types of enhancing CPA masses, including lymphoma or abscess vs. metastases and hemangioblastoma vs. lymphoma.

Proton MR spectroscopy is another advanced MRI option. Specific signs of CPA meningiomas include a combination of elevated glutamate/glutamine and a characteristic presence of alanine at 1.5 ppm [3)].

A myo-inositol peak in schwannomas at 3.55 ppm has also been demonstrated [4)].

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The 62-year-old woman, a former smoker for 2 years, has a history of two cesarean sections, underwent polypectomy by hysteroscopy, and had a curettage procedure. She also has a medical

history of Type 2 Diabetes Mellitus, hypothyroidism, hypertension (HTA), and dyslipidemia (DLP).

Sudden right-sided hearing loss.

Space-occupying lesion in the right cerebellopontine angle, extending to the ipsilateral internal auditory canal, measuring approximately 22 x 24 mm in maximum diameters on the axial plane (oblique axes) and 17 mm in the long axis. The lesion diffusely enhances with intravenous contrast, presenting a dural tail towards the anterior region, consistent with cerebellopontine angle meningioma vs. vestibular schwannoma. It produces a discreet impression on the adjacent cerebellar parenchyma without edema. The anterosuperior edge of the lesion is immediately adjacent to the cisternal course of the right V cranial nerve, without clear compression.

The acoustico-facial bundle and cistern of the left cerebellopontine angle are without alterations. The fourth ventricle and cerebellar tonsils are normal. No signal changes are observed in the brainstem or cerebellum.

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Laird FJ, Harner SG, Laws ER Jr, Reese DF. Meningiomas of the cerebellopontine angle. Otolaryngol Head Neck Surg. 1985 Apr;93(2):163-7. PubMed PMID: 3921906.
2)
Hakyemez B, Erdogan C, Bolca N, Yildirim N, Gokalp G, Parlak M. Evaluation of different cerebral mass lesions by perfusion-weighted MR imaging. J Magn Reson Imaging 2006; 24:817–824.
3)
Cho YD, Choi GH, Lee SP, Kim JK. (1)H-MRS metabolic patterns for distinguishing between meningiomas and other brain tumors. Magn Reson Imaging. 2003; 21:663–672.
4)
Bonneville F, Savatovsky J, Chiras J. Imaging of cerebellopontine angle lesion: an update. Part 1: enhancing extra-axial lesions. Eur Radiol 2007; 17:2472-2482.