

Hemangioblastoma MRI

The combination of a peripheral posterior fossa cyst with a mural nodule supplied by enlarged vessels may be pathognomonic ¹⁾.

Based on MRI findings, there are several known types of this tumor. The most common type consists of small nodular tumors on the side of a large cyst and the two rarer types comprise a solid mass, or a lesion with an enhanced cyst wall due to cystic nodules, which exhibits enhanced uneven walls on imaging ²⁾.

Postcontrast MR of the head and spine is the best currently available means of detecting hemangioblastomas associated with VHL ³⁾.

At present, no unified radiological classification system based on magnetic resonance imaging (MRI) findings exists for cerebellar hemangioblastoma, and this tumor type can be solid or cystic mass, according to the MRI findings. The most common presentation of cerebellar hemangioblastoma observed radiologically is a large sac with small nodules, where the wall of the large cyst is not enhanced. A tumor with enhanced large cysts and tumor nodules is extremely rare ⁴⁾.

T1

hypointense to isointense mural nodule

CSF signal cyst content

T1 C+ (Gd)

mural nodule vividly enhances ⁵⁾ cyst wall does not enhance ⁶⁾.

T2

hyperintense mural nodule flow voids due to enlarged vessels may be evident especially at the periphery of the cyst, seen in 60-70% of cases ⁷⁾ fluid filled cyst, similar to CSF

MR perfusion imaging:

high rCBV ratios

ADC and normalized ADC are valuable in the differential diagnosis of posterior fossa solid hemangioblastoma(PFSH) from other tumors with abundant blood supply ⁸⁾.

¹⁾

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