

# Cerebellopontine angle atypical teratoid rhabdoid tumor

In young children whose presenting symptom is an acute [facial nerve palsy](#) with a [cerebellopontine angle tumor](#), AT/RT should be highly suspected <sup>1)</sup>.

[Cerebellopontine angle](#) (CPA) involvement was more frequent (8/11, 72.7%) in [atypical teratoid rhabdoid tumor](#) than in [medulloblastoma](#) (4/36, 11.1%) ( $p < 0.001$ ). Intratumoral hemorrhage was more common in atypical teratoid-rhabdoid tumor (9/19, 47.4%) than in medulloblastoma (2/36, 5.6%) ( $p < 0.0001$ ). All atypical teratoid-rhabdoid tumors and all medulloblastomas for which [DWI](#) was available displayed increased signal intensity on DWI compared with normal brain parenchyma. The mean [ADC](#) values for tumor types were not significantly different.

Atypical teratoid-rhabdoid tumor presents at a younger age than medulloblastoma. Although atypical teratoid-rhabdoid tumor and medulloblastoma display similar imaging characteristics on conventional MRI, CPA involvement and intratumoral hemorrhage are more common in atypical teratoid-rhabdoid tumor. If a pediatric posterior fossa mass that displays restricted diffusion is involving the CPA, atypical teratoid-rhabdoid tumor is a more likely consideration than medulloblastoma <sup>2)</sup>.

## Treatment

Cytoreductive surgery can decrease the tumor burden in AT/RT, but may be difficult to achieve in the cerebellopontine angle (CPA) <sup>3)</sup>

Specifically, these highly vascular lesions often infiltrate into the porus acusticus in very small infants, thus eliminating the possibility for a safe and complete resection. Additionally, a more benign lesion (that is, schwannoma) may be assumed, which would invariably delay treatment. Thus, the identification of perioperative variables that differentiate these tumors can aid in the surgical planning and prognostication <sup>4)</sup>.

<sup>1)</sup> , <sup>4)</sup>

Siu A, Lee M, Rice R, Myseros JS. Association of cerebellopontine angle atypical teratoid/rhabdoid tumors with acute facial nerve palsy in infants. J Neurosurg Pediatr. 2014 Jan;13(1):29-32. doi: 10.3171/2013.10.PEDS13292. Epub 2013 Nov 15. PubMed PMID: 24236449.

<sup>2)</sup>

Koral K, Gargan L, Bowers DC, Gimi B, Timmons CF, Weprin B, Rollins NK. Imaging characteristics of atypical teratoid-rhabdoid tumor in children compared with medulloblastoma. AJR Am J Roentgenol. 2008 Mar;190(3):809-14. doi: 10.2214/AJR.07.3069. PubMed PMID: 18287456.

<sup>3)</sup>

Bonneville F, Sarrazin JL, Marsot-Dupuch K, Iffenecker C, Cordoliani YS, Doyon D, et al: Unusual lesions of the cerebellopontine angle: a segmental approach. Radiographics 21: 419-438, 2001

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