Meningioma without dural attachment

Cushing and Eisenhardt originally classified meningiomas without dural attachment in intraventricular, subcortical and deep Sylvian [1)]

Nowadays, meningiomas without dural attachments are classified in supratentorial (intraventricular, intraparenchymal or subcortical, pineal region, deep Sylvian) and infratentorial (intraventricular, inferior tela choroidea, cisterna magna and intraparenchymal) [2)]. The most common lesions in this group occur in pediatric population and have an infratentorial location [3)].

Meningiomas are thought to arise from the meningothelial cells within the arachnoid and are typically recognized by their attachment to the dura. These cells can also be found in the choroid plexus and tela choroidea, which can explain why meningiomas may rarely occur in other locations without dural attachment. In the absence of dural attachment, they are categorized into intraventricular, pineal region, intraparenchymal, subcortical and deep Sylvian fissure meningiomas (SFMs) [4)].

A survey of the literature reveals that the majority of cases of meningiomas without dural attachments occur either in children or below the tentorium. Extremely rare cases of supratentorial meningiomas without dural attachment have been described in adults. The uncommon locations of these tumors at sites distant from the dura mater is postulated to reflect the rare occurrence of arachnoidal cap cells in the Virchow-Robin spaces along the cerebral vasculature or in pial layers distant from the dura mater. [5)].

Meningioma without dural attachment is not considered to be rare in pediatric meningioma and should be included in the differential diagnosis.

A subgroup located in the sylvian fissure (also called deep sylvian meningiomas) has been described, and these represent a radiological and neurosurgical challenge.

see Sylvian fissure meningioma without dural attachment.

1)
Cushing H, Eisenhardt L. Meningiomas: Their Classification, Regional Behaviour, Life History and Surgical End Results. Hafner Publishing Company; NYUSA: 1960.
2)
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3)
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4) , 5)
Chiocca EA, Boviatsis EJ, Westmark RM, Short MP, Richardson EP, Zervas NT. Deep sylvian fissure meningioma without dural attachment in an adult: case report. Neurosurgery. 1994 Nov;35(5):944-6; discussion 946. Review. PubMed PMID: 7838346.