Dural Tail Sign

The dural tail (DT) has been described as a common feature in meningiomas. There is a great variation of tumor invasion and extent of tumor cells in the DT.

The recognition of the meningiomas and surrounding dural tail limits is one of the most challenging goals during a meningioma resection. Further, the possibility of better tumor control depends on the extension of the tumor to be removed and includes the dura around the mass.

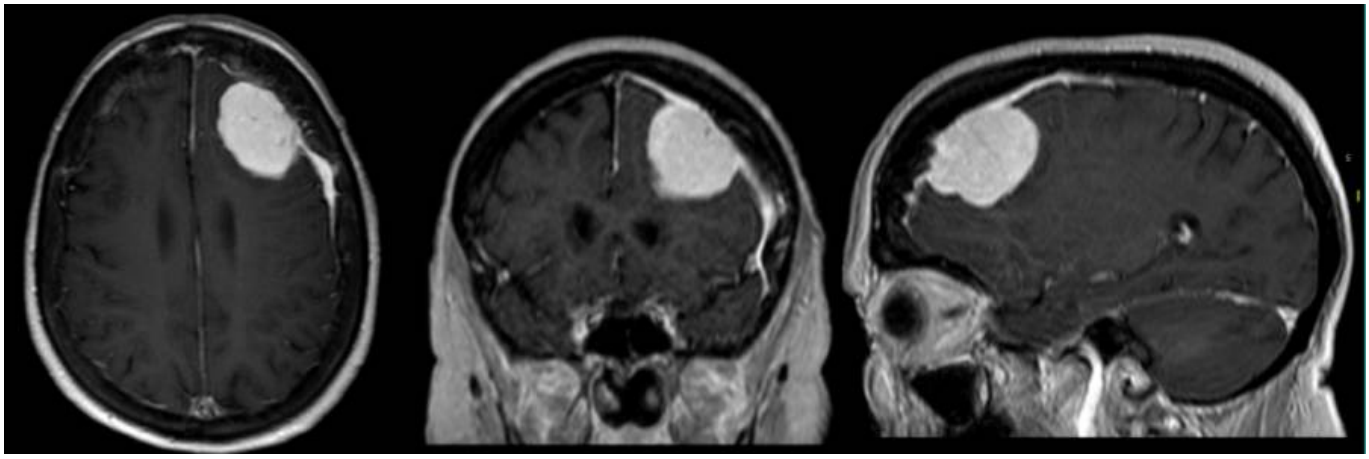
The necessity to include the whole DT in Gamma Knife radiosurgery is not clear, since inclusion increases the target volume and therefore increases the risk of complications.

Bulthuis et al. included only the part of the DT closely related to the tumor mass in the target. The median follow-up period was 41 months (range 12-123).

In image-based meningiomas, the overall local control rate was 96.2% with 2- and 5-year control rates of 98.0% and 95.1%, respectively. In WHO grade I tumors, the overall local control rate was 85.9% with 2- and 5-year control rates of 94.5% and 88.0%, respectively. The overall local control rate in World Health Organization (WHO) grade II tumors was 70.6% with control rates of 83.4% and 64.4% after 2 and 5 years, respectively. The growth of all new tumors was found in the radiation target area. No tumor growth was observed in the part of the DT that had been excluded from the target volume.

They found in this study that routinely excluding the DT from the target does not lead to out-of-field tumor progression. Given the possibility that the DT is infiltrated with tumor cells, regular follow-up is needed [1)]

A 68-year-old patient who had been under study for resting tremor for less than a year.



Large left frontal extraaxial lesion with a maximum diameter of 4.1 x 2.9 x 3.5 cm (AP x T x CC) with significant contrast enhancement and an associated dural tail sign. It causes a mass effect on the left frontal lobe with mild edema. Posterior to this lesion there is a relatively extensive pseudonodular thickening of the left pachymeninge of at least 3 cm in craniocaudal diameter, 2.2 anteroposterior and with a maximum thickness of 8 cm.

1)

Bulthuis VJ, Hanssens PE, Lie ST, van Overbeeke JJ. Gamma Knife radiosurgery for intracranial meningiomas: Do we need to treat the dural tail? A single-center retrospective analysis and an overview of the literature. Surg Neurol Int. 2014 Sep 5;5(Suppl 8):S391-5. doi: 10.4103/2152-7806.140192. eCollection 2014. PubMed PMID: 25289168; PubMed Central PMCID: PMC4173303.

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