Tentorial meningioma treatment

From a surgical perspective, tentorial fold (TF) meningiomas (TFM) are a unique entity of tumors. They involve the supratentorial and infratentorial space and often are in close contact to the cavernous sinus, cranial nerves, and the mesencephalon. Complete resection is challenging and can be hazardous.

**Position**

see Sitting position, Prone position, Park bench position.

**Approaches**

Tumors of tentorial fold often reach the basal part of the midbrain or extend into the cavernous sinus, and the approach chosen should eschew damage to vulnerable structures like the parahippocampus and uncus hippocampi. To tackle these demanding problems, a number of different surgical strategies in reference to tumor volume and tumor extension have been developed and particular attention has been paid to meningiomas of the anterior inner tectorial ring.

The standard subtemporal approach and its variations are most frequently requested for sphenoidal wing meningiomas, followed by Yasargil's T1- and T2-type tentorial meningiomas arising from the inner ring of the tentorium.

Tentorial meningiomas near the middle third of the medial tentorial edge with supratentorial extension are usually removed via the subtemporal approach. This approach, however, may not be practical, especially for huge tumors extending to the posterior subtemporal space.

see Surgical anatomy and approaches

External link: http://neurosurgery.mgh.harvard.edu/images/men29.jpg

**Incision**

A U-shaped or linear incision is made. The preference of the kind of the incision is dictated by the size of the tumor.

**Craniotomy**

The size of the craniotomy is also dictated by the size of the tumor.

Burr holes are placed above and below the transverse sinus and in a majority of the times, the bone over the sinus is drilled away. For the superior and inferior components of the craniotomy the craniotome can be perfectly used after the dura is dissected from the bone.

After the craniotomy, the dura of the occipital lobe and the suboccipital compartment are exposed. The transverse sinus is placed between both compartments. The transverse sinus and its junction with the torcular Herophilii are exposed.
Surgical removal

Dynamic retraction microneurosurgery for the treatment of medial tentorial meningiomas is feasible, which can obviate or reduce the amount of brain retraction needed, and may be of help in lowering the risk of postoperative neurological deficits and complications and leading to reduced hospitalization cost and improved surgical outcomes ³).

Passacantilli et al. report the experience with a thulium laser during the surgical removal of a tentorial meningioma.

The thulium laser proved to be a useful tool during coagulation, shrinking, and resection of the basal implant of the tumor. Use of the laser made the surgical procedure faster and easier, and no intraoperative bleeding was noted. No side effects were observed ⁴).