Falcotentorial meningioma

see also Tentorial meningioma.

Falcotentorial meningiomas are rare tumors of the pineal region that arise from the dural folds where the falx and tentorium meet and are often intimately related to the vein of Galen and straight sinus.

Among pineal region tumors meningiomas are extremely rare and include falcotentorial meningioma and velum interpositum meningiomas. It is very difficult to discriminate between these two lesions and description of the clinical presentation and the surgical technique in approaching these tumors is limited.

Epidemiology

Meningiomas arising from the falcotentorial junction are extremely rare. Fewer than 50 cases have been reported in the literature.

Because the tumor arises at the junction of dural folds in which the straight sinus and both torcular and arachnoid granulations are found, however, its infrequency in that region is not surprising.

Clinical features

Most patients present with symptoms of increased ICP and occasionally with visual symptoms related to the tumor's occipital location.

Diagnosis

Computerized tomography (CT) showed no specific findings, but there was no evidence of edema around the tumor. Magnetic resonance (MR) imaging revealed a round, smooth-bordered mass with a peritumoral rim, without edema, and showing marked contrast enhancement. The multiplanar capability of MR imaging delineated the relationship between the tumor and adjacent structures better than did CT. Detailed knowledge of the vascular structures, especially evidence of occlusion of the galenic venous system and the development of collateral venous channels, is critical for successful surgery; stereoscopic cerebral angiography is necessary to achieve this aim.

Because these tumors grow slowly, collateral venous outflow channels for the deep venous system develop via the basal vein of Rosenthal, the petrosal, the precentral cerebellar, and the pontomedullary veins. Preoperative cerebral angiography is crucial to determine the status of the straight sinus because the lower falx cerebri, lateral tentorium, and upper falx cerebelli are excised with the tumor.

Complications

Because bilateral occipital retraction is required during the operation, transient cortical blindness routinely develops in cases involving largesized tumors. Patients should be informed of this transient neurological deficit prior to surgery.
Treatment

see Falcotentorial meningioma treatment.

Case series

see Falcotentorial meningioma case series.

Case reports

Falcotentorial meningioma case reports.