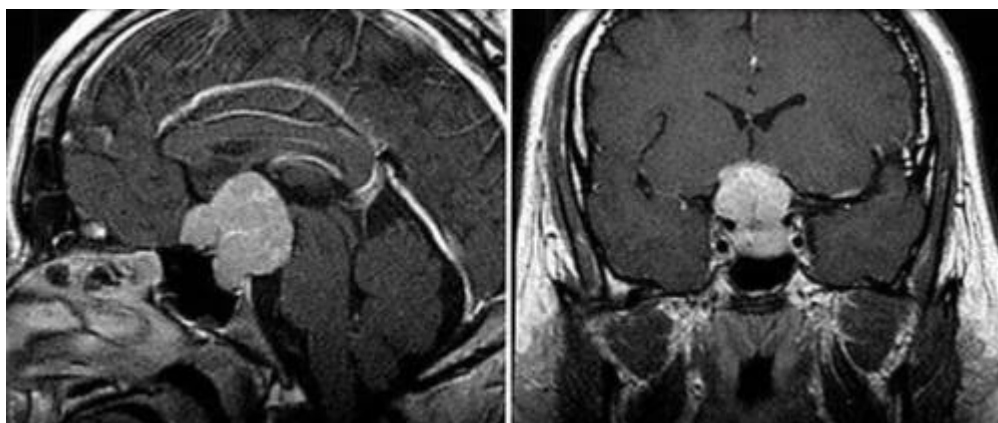


Tuberculum sellae meningioma magnetic resonance imaging

Magnetic resonance imaging has supplanted computed tomography as the imaging modality of choice for sellar lesions and parasellar lesions, but unenhanced MR imaging does not reliably distinguish between all tuberculum sellae meningiomas and pituitary macroadenomas. Accurate differentiation between these alternative diagnoses of a suprasellar mass is important because a tuberculum sellae meningioma always requires a craniotomy, whereas a transsphenoidal route is preferred for removing most pituitary macroadenomas. The gadolinium-enhanced MR images of seven patients with tuberculum sellae meningioma and seven with pituitary macroadenoma were reviewed retrospectively. Although no specific radiological feature was pathognomonic, a combination of several features allowed the correct diagnosis in all cases. Three characteristics of tuberculum sellae meningiomas distinguish them from pituitary macroadenomas: 1) bright homogeneous enhancement with gadolinium, as opposed to heterogeneous, relatively poor enhancement; 2) a suprasellar rather than a sellar epicenter of tumor; and 3) tapered extension of an intracranial dural base. Each of these findings can be subtle, but careful examination of gadolinium-enhanced, high-quality, thin section coronal and sagittal MR images of the parasellar region for this constellation of findings will allow the correct preoperative diagnosis in patients with either of these tumors ¹⁾.



Gadolinium-enhanced sagittal and coronal T1 weighted image demonstrating a tuberculum sellae meningioma with suprasellar and sellar involvement.

¹⁾

Taylor SL, Barakos JA, Harsh GR 4th, Wilson CB. Magnetic resonance imaging of tuberculum sellae meningiomas: preventing preoperative misdiagnosis as pituitary macroadenoma. Neurosurgery. 1992 Oct;31(4):621-7; discussion 627. doi: 10.1227/00006123-199210000-00002. PMID: 1407446.

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