Planum sphenoidale meningioma

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Planum sphenoidale meningiomas are anterior skull base meningiomas, overlying the area of the cribriform plate of the ethmoid bone, sphenofrontal suture, and planum sphenoidale.

Arise from the flat part of the sphenoid bone anterior to the chiasmatic sulcus.

The tumors are usually bilateral based on their midline origin, although they can also be unilateral.

Classification

Planum sphenoidale meningioma classification.

Epidemiology

Planum sphenoidale meningioma epidemiology

Clinical features

Planum sphenoidale meningioma clinical features.

Diagnosis

Planum sphenoidale meningioma diagnosis

Differential diagnosis

Planum sphenoidale meningioma differential diagnosis.

Treatment

Planum sphenoidale meningioma treatment

Outcome

Planum sphenoidale meningioma outcome

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Planum sphenoidale meningioma case series.

Case reports

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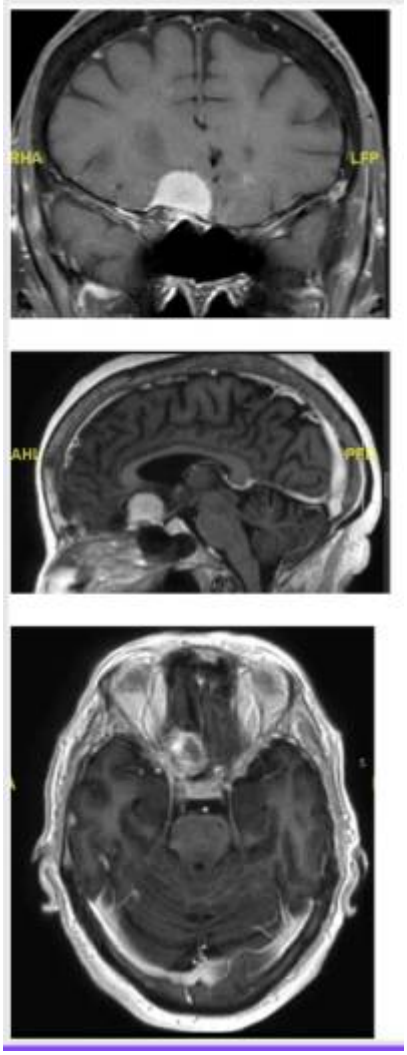
General University Hospital of Alicante Cases

A 77-year-old female was referred by planum sphenoidale meningioma with poorly defined dizziness, discomfort, and anxiety with an increase in tremor in the right-hand side and a feeling of jaw tightness, without loss of consciousness or focal neurological deficits. Upon arrival at the Emergency Department, the symptoms had subsided.



Extra-axial mass located on the right side of the planum sphenoidale measuring 1.7 x 2.1 x 1.9 cm (CC x AP x TR). This lesion shows intense and homogeneous contrast enhancement, along with associated thickening of the adjacent dura.

It also presents focal hyperostosis of the sphenoid bone where it is located and mild hyper pneumatization of the right sphenoid sinus.

Of note, this lesion has a small intraosseous component in the sphenoid planum.

Superiorly, it exerts a mass effect on the base of the right frontal lobe, which shows moderate vasogenic edema.

Medially, it contacts the proximal segment A2 of the right anterior cerebral artery, which is displaced

to the left.

Laterally, it is related to the right anterior clinoid process.

Inferiorly, the tumor surrounds the right internal carotid artery superiorly, medially, and laterally, covering approximately 180° of its circumference. The right internal carotid artery does not show a diminished caliber and retains a normal signal void.

The lesion also contacts the inferior cisternal portion of the right optic nerve, which is displaced inferiorly. There doesn't appear to be contact with the optic chiasm.

Supine position. Right frontal incision and right lateral supraorbital craniotomy. Papery dura mater that disintegrates when lifting the bone flap.

Access to the optic-carotid cistern is achieved, and the tumor implanted in the sphenoid planum is early identified. The tumor base is coagulated, and following the arachnoid plane, the tumor capsule is released from the right optic nerve with its tail extending over it, the right A1 segment, the optic chiasm, and the lamina terminalis. The lesion is mobilized and removed as a whole.

Arterial bleeding from a pore at the A1-A2 junction requires temporary clipping of the A1 segment for 2 minutes to facilitate repair with two mini clips in tandem. Pulse of indocyanine green demonstrates patency of A2 and A1.

Coagulation of the implantation base is performed. The bed is covered with Spongostan. Semi-hermetic closure with Duragen and Tachosil.

Bone fixation with mini plates Subcutaneous closure with absorbable sutures and skin closure with staples.