Trigeminal Schwannoma  
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History  
17 year old male with facial pain.

Diagnosis  
Trigeminal Schwannoma

Discussion  
The trigeminal nerve (CN V) is the largest cranial nerve. It originates from 4 nuclei-mesencephalic nucleus (proprioception), sensory nucleus (tactile), motor and spinal (pain and temperature). The gasserian ganglion resides in Meckel's cave and trifurcates into three divisions-ophthalamic (superior orbital fissure), maxillary (foramen Rotundum) and mandibular (foramen ovale).

Trigeminal schwannomas account for ~0.2% of intracranial tumors and ~2-3% of intracranial schwannomas. Trigeminal schwannomas can arise anywhere along the nerve but are most common in the gasserian ganglion in a parasellar location. These tumors are usually smoothly margined, isointense to gray matter on T1, and hyperintense on T2. Enhancement is intense; homogeneous in small tumors while central necrosis is seen larger tumors. Tumors can extend through the divisional foramina or posteriorly through the porus trigeminum. The Meckel's cavity can be involved either by extrinsic or intrinsic disease. Extrinsic lesions, usually bony metastasis, chordoma, or chondrosarcoma, destroy adjacent bone as they extend toward the Meckel's cavity. Intrinsic lesions simply expand the Meckel's cavity. Intrinsic lesions include primary tumors of the Meckel's cavity as well as secondary neoplasms from perineural spread of local tumors, leptomeningeal, or hematogenous metastasis. Primary tumors of the Meckel's cavity include trigeminal schwannoma, meningioma, and epidermoid cyst. Pituitary neoplasms and aneurysms may extend into the Meckel's cavity.

Findings  
CT-Noncalcified, heterogeneously enhancing left parasellar mass with secondary remodeling of the skull base.
MR-Heterogeneous, predominantly T2-FLAIR, T2 and post-gadolinium hyperintense lesion arising from the left cavernous sinus and extending into the foramen ovale.

Reference  
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