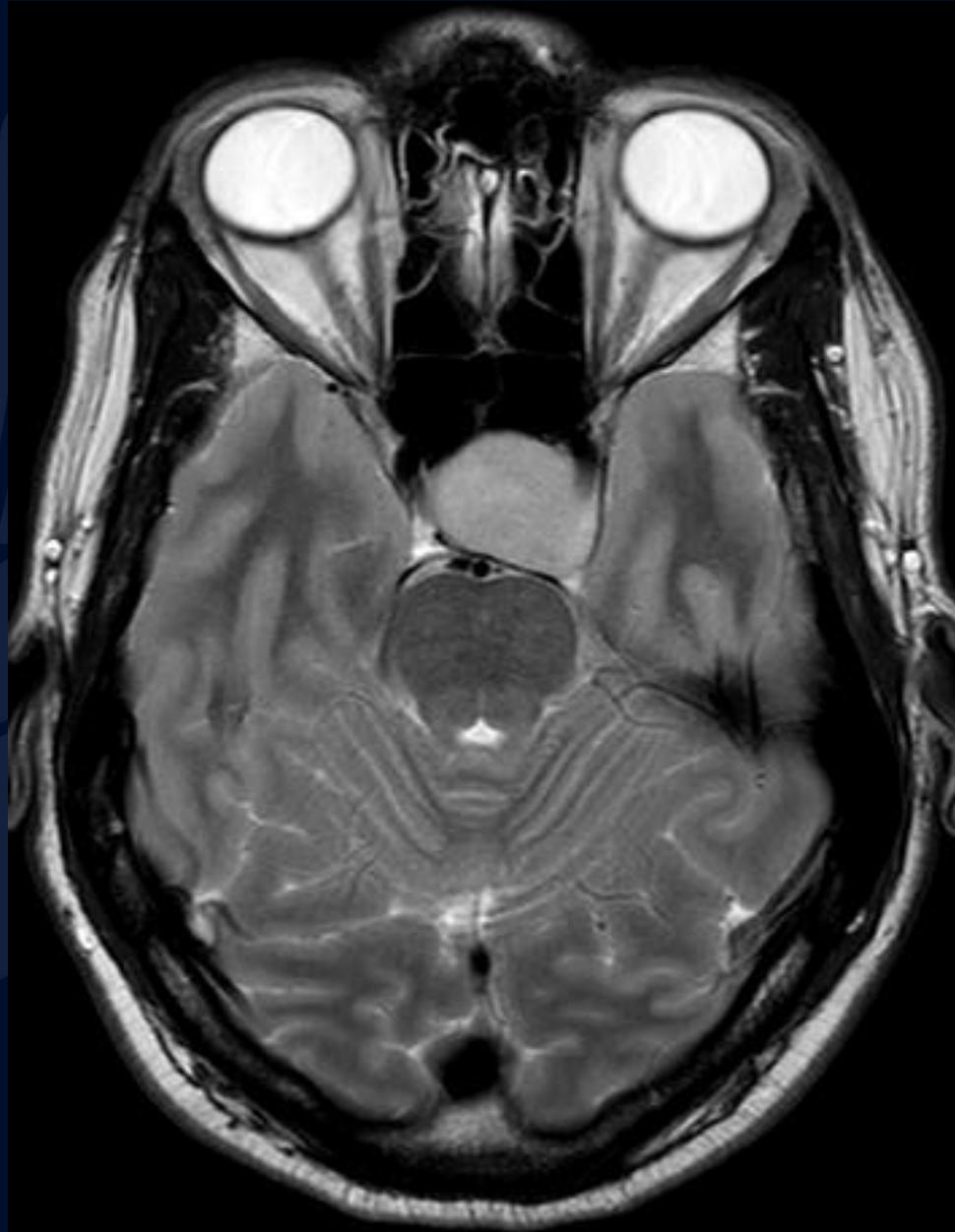


32-year-old male with visual changes and testicular hypofunction

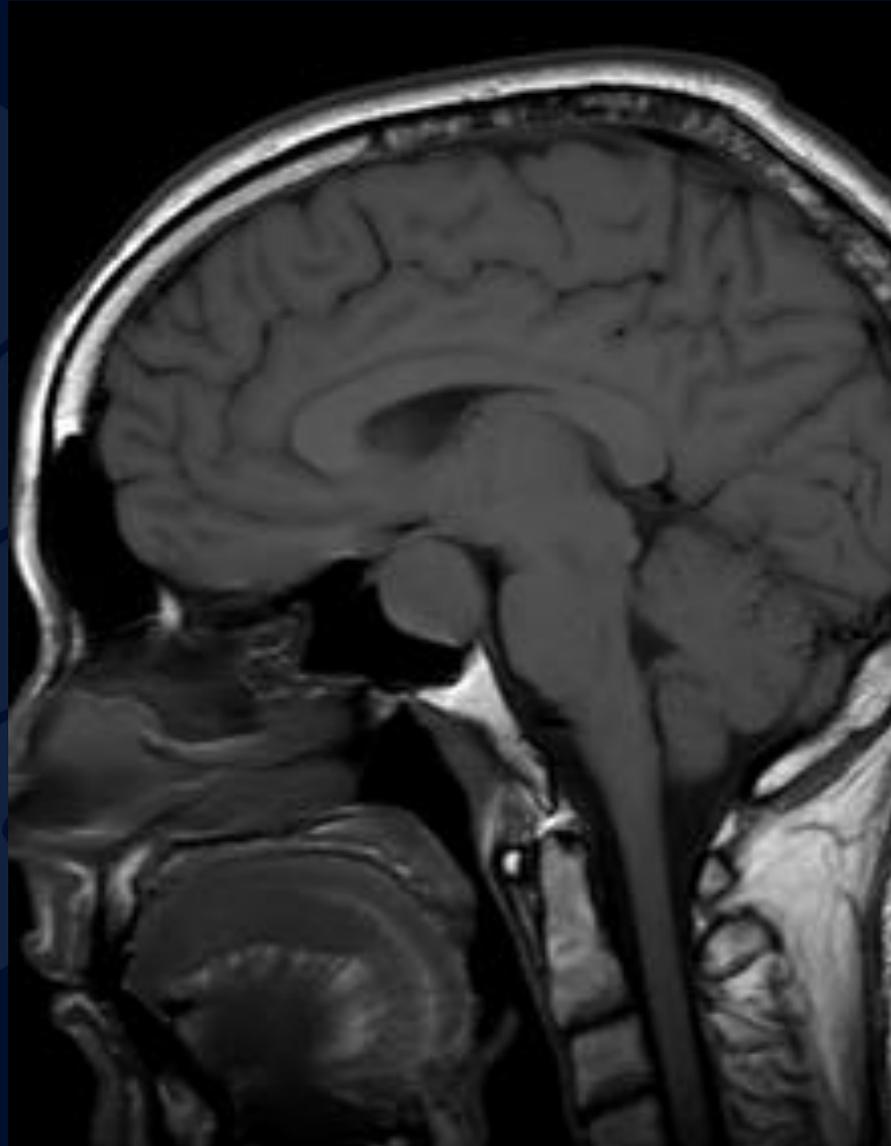
Andrew Klufas, MD, MBA

Leo Wolansky, MD

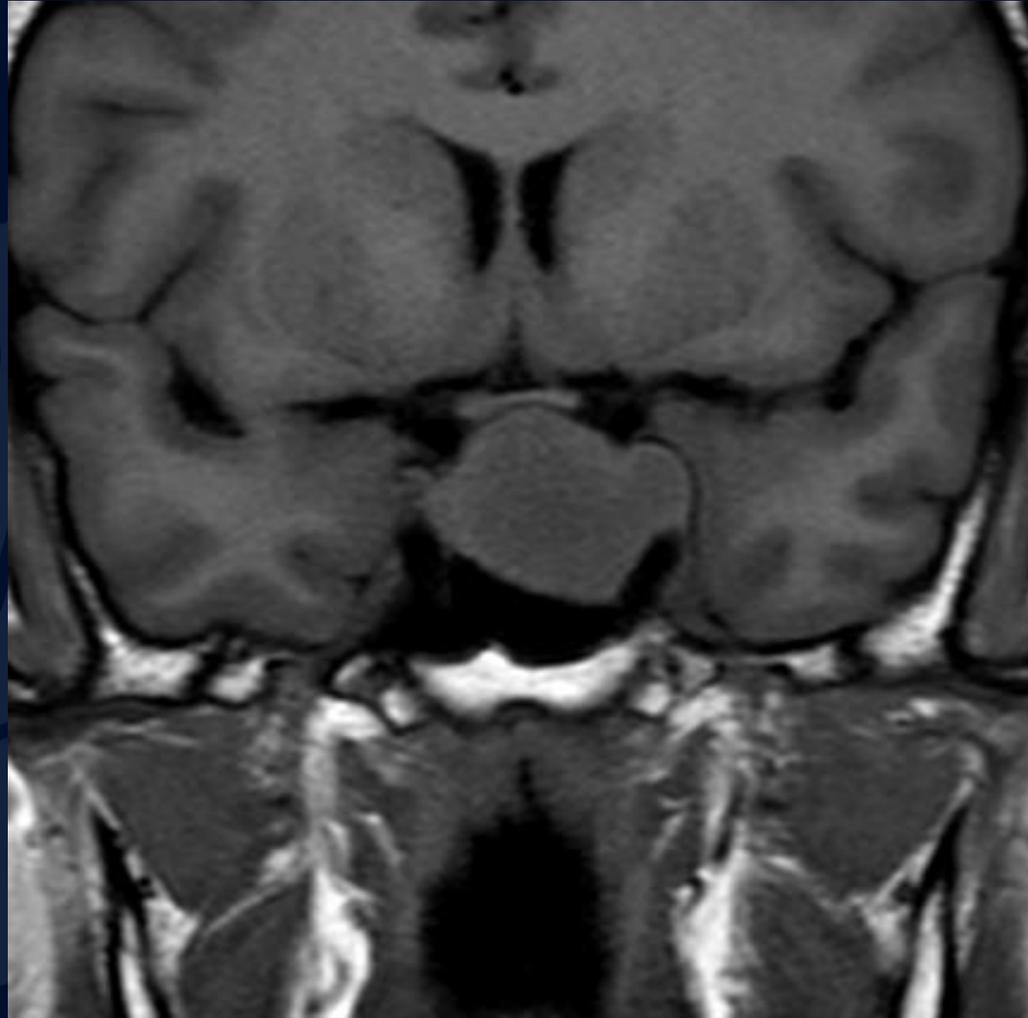
MR T2



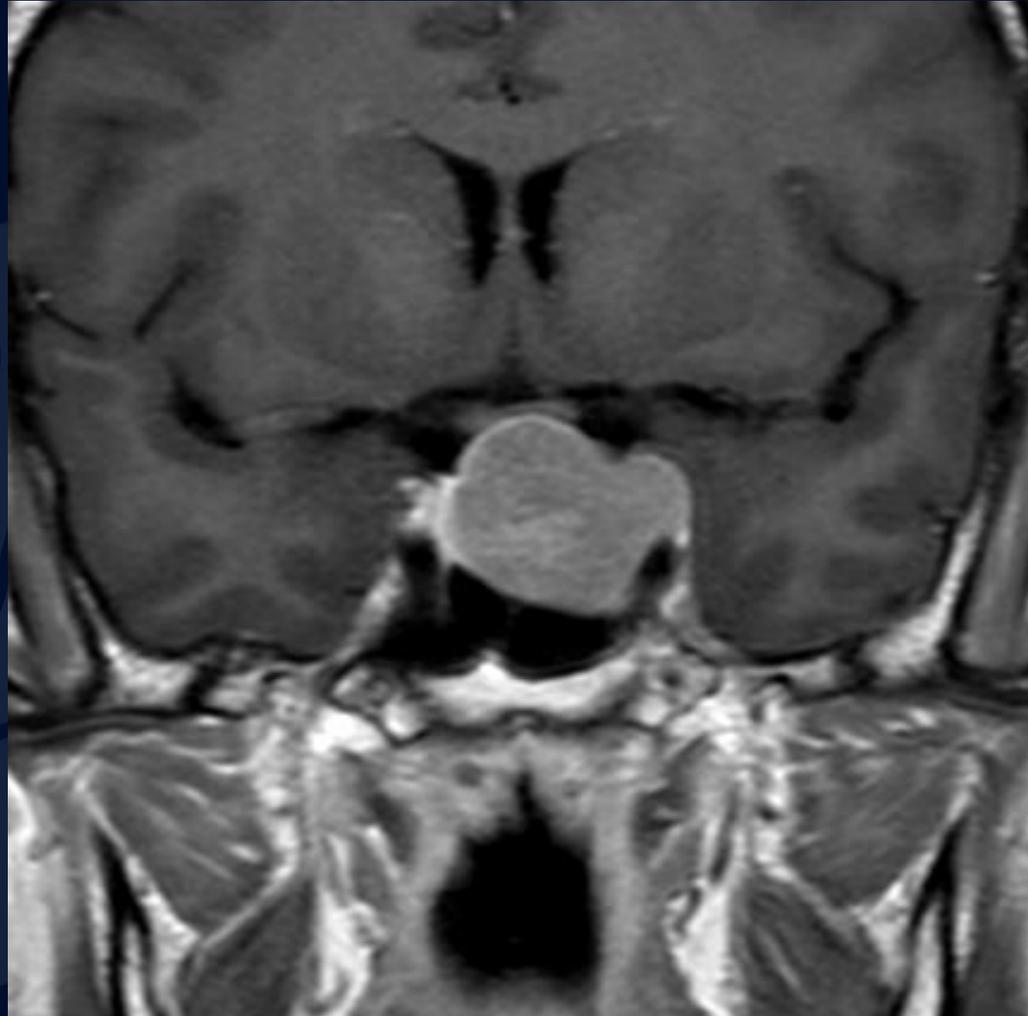
MR T1



MR T1



MR T1 + Gad





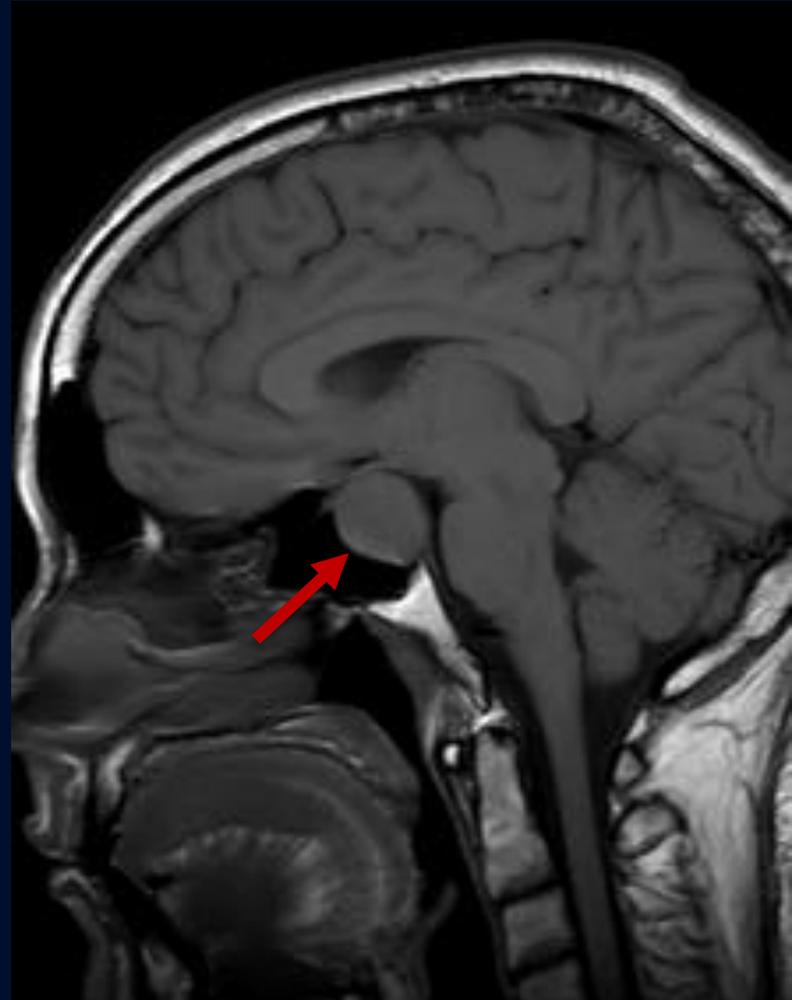
?

Pituitary Macroadenoma

T2



T1



Left sellar T2 hyperintense T1 isointense mass

No mass effect

T1



T1 + Gad



Left sellar T1 isointense mass with post-contrast enhancement resulting in superior displacement of the optic chiasm and extension into the left cavernous sinus

Pituitary Macroadenoma

Definition and Classification: Macroadenomas are >10 mm diameter masses arising from the pituitary gland. Knosp classification can be used to delineate degree of cavernous sinus invasion.

Clinical Presentation: Typically presents with symptoms of hypopituitarism, bilateral hemianopia, and other sequelae of mass effect on surrounding structures

Growth: Pituitary macroadenomas typically grow superiorly, with extension in the cavernous sinuses, occasionally resulting in compression of CN II and CN VI

Imaging:

- CT
 - Isointense mass with moderate contrast enhancement
- MRI:
 - T1: Isointense and homogenous compared to grey matter, with post-contrast enhancement
 - T2: Isointense to grey matter, may have a hypointense rim

Pituitary Macroadenoma

Differential Diagnosis:

- Pituitary Metastasis
 - Less well defined and in the setting of known metastasis
 - Bone destruction often associated with this finding
- Pituitary Carcinoma
 - Rare and unfortunately indistinguishable on imaging
- Meningioma
 - Able to distinguish by presence of dural tail and enhances to a greater degree
 - Hyperdense on CT non-contrast
- Craniopharyngioma
 - More likely to be cystic and have areas of calcification
 - Hyperintense on T1
- Ranthke Cleft Cyst
 - Likely to be midline
 - Less likely to have a dark rim on T2

References

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