74-year-old female who presents with headaches and hormonal abnormalities.

Erica Shen, MD PhD

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T1 Sagittal

Gd-T1 Sagittal





T1 Axial





Gd-T1 Axial









T2 Axial









CT Axial





Craniopharyngioma





Gd-T1 Sagittal

Suprasellar, multilobulated lesion exhibiting avid heterogenous contrast enhancement on T1-Gd. The lesion is irregular with rounded contour abutting the pituitary gland.





T1 Axial

The lesion is isointense to hypointense on T1.





Gd-T1 Axial

The lesion exhibits avid heterogenous contrast enhancement on T1-Gd. It is irregular with rounded contour.





T2 Axial

The lesion is exhibiting heterogenous hyperintensity on T2.





CT Axial

The lesion is heterogeneously hyperdense on CT.



Craniopharyngioma

- Benign, partially cystic, sellar region tumor.
- Derived from remnants of craniopharyngeal duct or Rathke pouch epithelium.
- Most common non-neuroepithelial intracranial neoplasm.
 - 2-5% of all adult tumors; 5.6-13% of all pediatric tumors.
- Bimodal age distribution:
 - 1st peak: 5-15 year olds;
 - 2nd peak: 45-60 year olds.
- Two types:
 - Adamantinomatous (cystic mass in childhood);
 - Papillary (solid mass in older adults);
 - Adamantinomatous type is 10x more common than papillary type, occurs in first 2 decades of a child's life.

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Mortini, P., Gagliardi, F., Boari, N., Losa, M., *Crit Rev Oncol Hematol,* 2013. Yang, I., Sughrue, M.E., Rutkowski, M.J., et al., *Neurosurg Focus*, 2010.

Imaging Findings

- Multilobulated, often large (> 5 cm).
- Occasionally giant or multicompartmental.
- CT:
 - 90% cystic, 90% Ca⁺⁺, 90% enhancing in adamantinomatous type;
 - Solid, isodense, rarely calcifies in papillary type.
- MRI: signal varies with cyst contents.
 - Cysts variably hyperintense on T₁ and T₂;
 - Solid portions enhance heterogeneously;
 - Cyst walls enhance strongly;
 - Cyst contents show broad lipid peak (0.9-1.5 ppm) on MRI spectroscopy.

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