Orbital venous varix

- Produces intermittent proptosis and diplopia during periods of venous hypertension, such as when coughing, straining or leaning forward.
- **CT high density intraconal mass.**
- **May have calcified phleboliths**
- CT may be normal need jugular compression or valsava

Imaging

- Intensely enhancing orbital mass that distends with increased venous pressure
- Nonenhancing foci of flow, hemorrhage, thrombosis, or cystic lymphatic spaces
- Best imaging tool: Dynamic CT without and with provocation maneuver

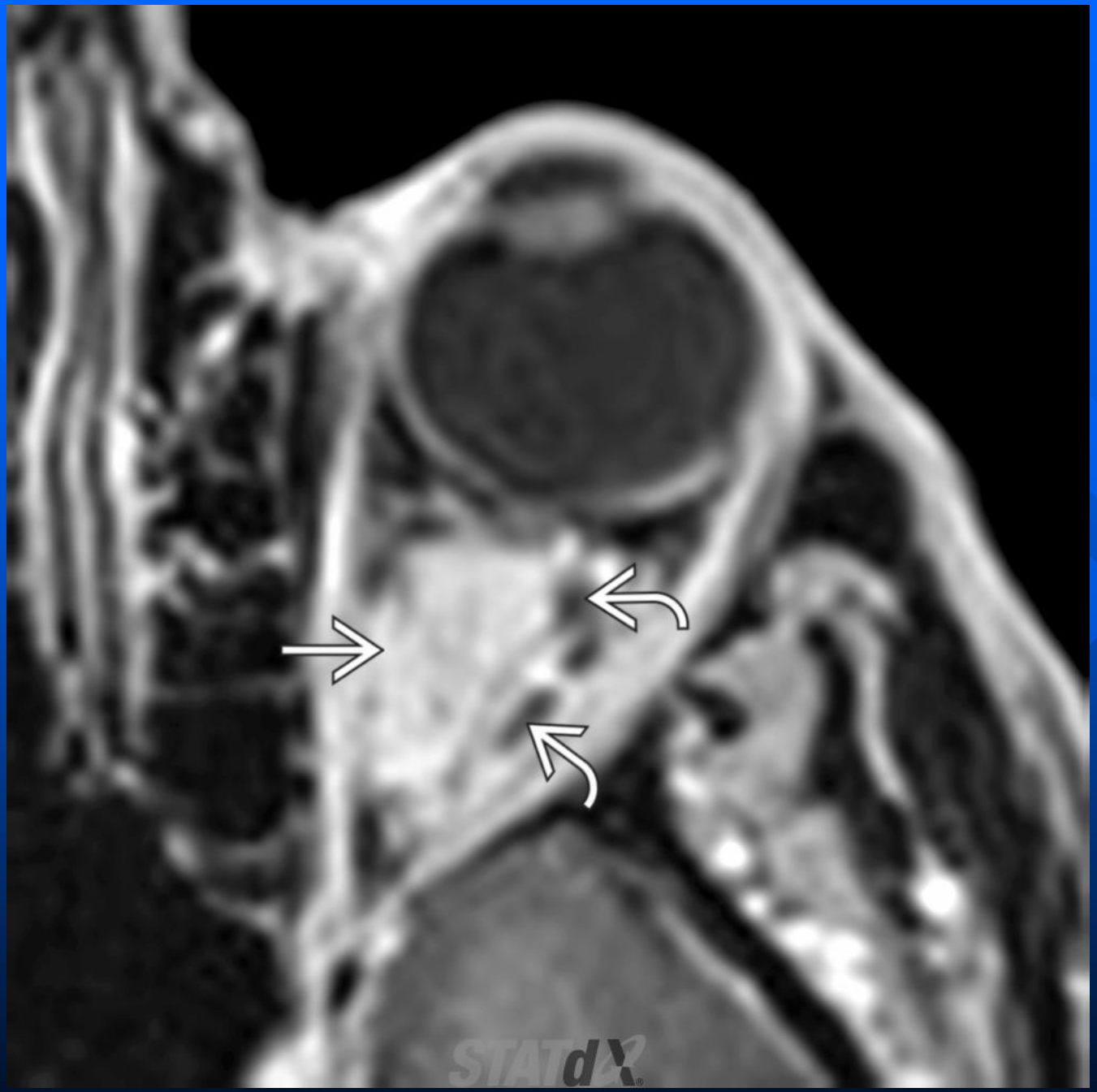
Clinical Issues

- Intermittent reversible proptosis
- Proptosis elicited by change in head position or Valsalva
- Variable pain and ophthalmoplegia
- Sudden worsening due to thrombosis or hemorrhage
- **Treatment options**
  - Observation if symptoms mild and stable
  - Transcatheter embolization or sclerosis
  - Surgery for intractable pain or threatened vision

DDX:

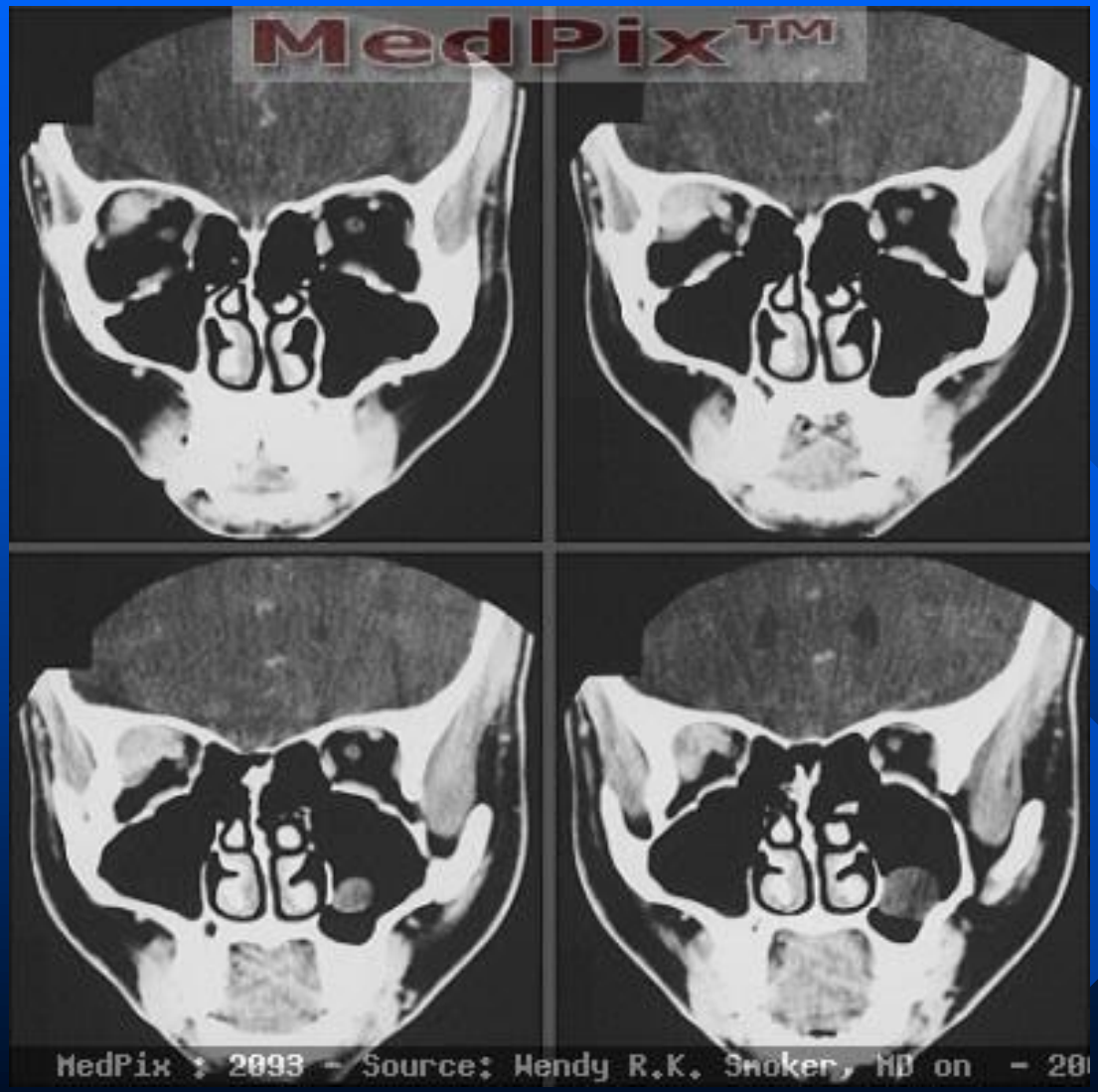
- Orbital Venolymphatic Malformation
  - May present with sudden proptosis due to hemorrhage
  - Multiloculated spaces, fluid levels, variable enhancement
  - May co-exist with varix
- Orbital Cavernous Malformation
  - Most common isolated orbital mass in adults
  - Well-defined, intense dynamic "fill-in" enhancement
- Orbital Infantile Hemangioma
  - Infant lesion, frequently regresses spontaneously
  - Irregular, intense enhancement and flow voids

Axial CECT in the same patient, holding breath in Valsalva maneuver, shows distention of a large extraconal varix posteriorly and laterally in the right orbit (white solid arrow). The right globe is slightly proptotic. The patient reported replication of symptoms with Valsalva.



Axial T1 C+ FS MR in the same patient shows intense, somewhat heterogeneous enhancement of the retrobulbar mass (white solid arrow). Nonenhancing regions (white curved arrow) may reflect cystic noncommunicating or lymphatic vascular spaces or may reflect relatively rapid or turbulent venous flow artifact.

Orbital venous varix



Initially normal without compression on jugular, low pressure tunicate, mas may be tubular or more complicated

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