MRI Characteristics of Cavernous Sinus and Superior Ophthalmic Vein Septic Thrombosis

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MRI Orbits
(Coronal T2 with fat suppression)

- Left periorbital edema (increased T2 signal, yellow arrows) extends inferiorly along the premalar tissues to the maxillary region, likely related to a left maxillary molar dental infection.
Axial T1 pre-contrast images showing left eye proptosis (the patient was 18 weeks pregnant at the time of imaging and contrast was not administered).
Axial T2 images demonstrating left periorbital edema (hyperintensity, yellow arrows) and left proptosis.
Coronal T2 sequence showing hyperintense signal in the left cavernous sinus (red arrow) with associated narrowing of the left internal carotid artery (ICA) (white arrow), compatible with left cavernous sinus thrombosis and associated spasm of the left cavernous ICA.
MRI Orbits
(Axial T1 with fat suppression)

Increased T1 signal in the enlarged left superior ophthalmic vein (red arrows), consistent with thrombosis.
Final Diagnosis

- Septic left cavernous sinus and superior ophthalmic vein thrombosis, secondary to left maxillary tooth abscess.