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FIGURE C
FIGURE D
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FIGURE F
Findings: MDCT post contrast axial (Figs. A, B), coronal (Figs. C, D) images and CT angiography (MIP Fig. E, VR Fig. F): The axial images show proptosis of the right globe with increased orbital vascularity and dilated enhanced superior ophthalmic vein (Fig. C). Also noted enlarged right enhanced cavernous sinus (Fig. D). Clearly visualized A-V shunting in the CTA MIP & VR images (Figs. E, F).

Diagnosis: Right orbital arteriovenous fistula

Discussion: Arteriovenous fistulas (AVFs) in the orbit are quite rare, and most are part of facial arteriovenous malformations. Arteriovenous fistulas develop from a single communication between an artery and a vein. Because the bypass of capillary beds results in decreased vascular resistance, regional blood flows preferentially through the fistula, thereby exposing the veins to increased intraluminal pressure.

Advances in spiral CT coupled with continuing progress in 3D imaging have resulted in exciting new applications for CT. In neuroradiology, these techniques can aid in the diagnosis and therapeutic planning of diseases of the neck vessels and of intracranial aneurysms.
angiography are especially important because they may replace the more invasive conventional angiographic procedures.

References:

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