

The Usefulness of the Source Images of Magnetic Resonance Angiogram in the Carotid Cavernous Fistula

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The cortical venous drainage from carotid-cavernous fistula (CCF) is associated with increased risk of intraparenchymal hemorrhage and may be the clue for the urgent indication of an endovascular treatment [1]. However it is difficult to infer direction of venous drainage from the clinical signs or symptoms of a patient with CCF. The source images of magnetic resonance angiogram (MRA) may useful to detect the direction and magnitude of the collateral circulations in the patient with carotid-cavernous fistula (CCF) [2]. A 68-year-old woman presented with progressive bilateral pulsatile tinnitus, headache and diplopia accompanied by swelling of both eyes, the right eye being more severely affected. She underwent surgical reconstruction of fractured facial bone 6 weeks ago due to car accident. From the 30th days after reconstruction, she suffered persistent progressive pulsatile tinnitus and periorbital pain. The MRA revealed marked leakage signals of arterial blood around cavernous sinus (Figure 1). The source image of MRA revealed increased trans-sellar collaterals, enlarged both sphenoparietal sinus and right side predominant elongated bilateral tortuous superior ophthalmic veins (Figure 2).

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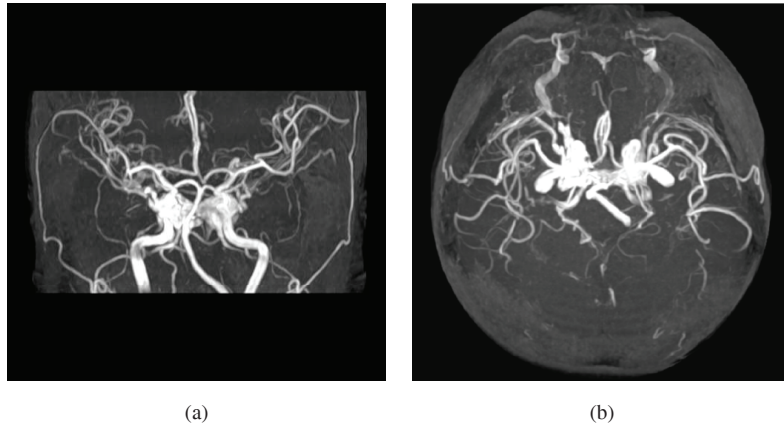


FIGURE 1: The magnetic resonance angiogram (MRA) of the patient showed increased flow related signals around both cavernous sinuses.

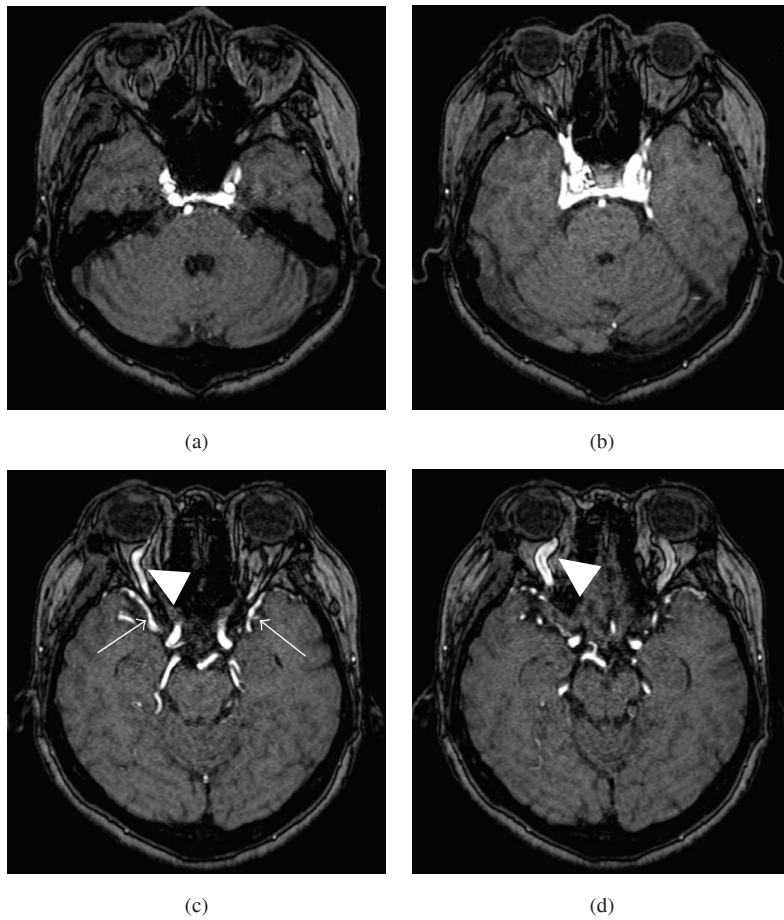


FIGURE 2: The source image of magnetic resonance angiogram (MRA) revealed increased transsellar collaterals (a, b), enlarged both inferior cerebral veins (C; arrow) and right side predominant elongated bilateral tortuous superior ophthalmic veins (c, d; arrow head).

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