Background: Indirect carotid-cavernous sinus fistulas of low-flow type (CCF) and the dural shunt syndrome are the result of the development of communication between small meningeal arteries and cavernous sinus.

Purpose: To assess the role of Color Doppler Imaging of retrobulbar vessels in the study of two patients with CCF of low-flow type.

Methods: We have used a sonographer with 8-15 MHz linear probe.

Results: The initial diagnosis was suspected clinically: both patients presented unilateral chemosis and orbital bruit, one of them presenting a pulsating exophthalmos. It was sustained by CDI of retrobulbar vessels: reversed flow in the superior ophthalmic vein, with a venous arterialisation and confirmed by complete selective digital subtraction angiography, which is essential for a correct diagnosis (early opacification of veins draining cavernous sinus, etc).

Conclusions: CDI of retrobulbar vessels is a repetitive non-invasive technique which is used for monitoring indirect carotid-cavernous fistulas of low-flow type because they are sometimes a self-limiting pathology (spontaneous venous thrombosis).