

Venous Transcranial Doppler

The value of conventional [transcranial Doppler ultrasound](#) in the diagnosis and monitoring of [cerebral venous sinus thrombosis](#) is unclear. Previous studies have suggested the usefulness of this method in two cases with [superior sagittal sinus thrombosis](#) that showed increased velocities of deep cerebral veins.

The purpose of the study of Canhão et al. was to evaluate the deep intracranial venous circulation in patients with that pathology. Venous transcranial Doppler ultrasound was performed with a range-gated 2 MHz transducer in 17 healthy volunteers and in six cases of proven acute [superior sagittal sinus thrombosis](#). Peak systolic, end diastolic and mean blood flow velocities were measured in the basal vein of Rosenthal (BVR) and deep middle cerebral vein (DMCV) through a posterior temporal window. In 16 controls and in one patient, the straight sinus was also studied through an occipital approach. Sex distribution and mean age of controls and patients were similar. Mean blood flow velocities in controls were as follows (mean, SD): DMCV, 10.4, 1.4 cm/s; BVR, 11.3, 1.8 cm/s; straight sinus, 29.5, 9.9 cm/s. Three of the patients with superior sagittal sinus thrombosis showed increased velocities either in the DMCV, the BVR or the straight sinus. One patient showed slightly increased velocities in the BVR, and the other two showed normal venous velocity values. This study confirms the usefulness of conventional transcranial Doppler ultrasound in detecting superior sagittal sinus thrombosis. However, a normal examination does not exclude this diagnosis ¹⁾.

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Canhão P, Batista P, Ferro JM. Venous transcranial Doppler in acute dural sinus thrombosis. J Neurol. 1998 May;245(5):276-9. PubMed PMID: 9617708.

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