

# Vasospasm Diagnosis

Diagnosis of vasospasm is made by some combination of clinical, cerebral angiographic, and transcranial doppler ultrasonographic factors.

It can be detected accurately by using MEPs. MEPs are a feasible bedside tool for online VS detection in an intensive care unit and, therefore, may complement existing diagnostic tools <sup>1)</sup>.

see [Angiographic vasospasm](#).

see [Transcranial Doppler for vasospasm diagnosis](#).

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The techniques used for identification of microcirculatory changes are [xenon CT scanning](#), [positron emission tomography](#), [single-photon emission computed tomography](#), [MRI perfusion imaging](#), and [CT perfusion \(CTP\)](#) with CTP being in advantage because of its low cost, rapid imaging, high spatial resolution, and ease of performance <sup>2)</sup>

Apart from imaging techniques, the clinical symptoms and the neurological examination of the patient play a crucial role. The disadvantage is that by the time [cerebral vasospasm](#) cause clinical symptoms, the ischemic event may have progressed too far, and the chance of a therapeutic intervention may have been missed <sup>3)</sup>.

<sup>1)</sup>

Grossauer S, Koeck K, Kraschl J, Olipitz O, Hausegger KA, Vince GH. Detection of Cerebral Vasospasm Following Aneurysmal Subarachnoid Hemorrhage Using Motor Evoked Potentials. *Neurosurgery*. 2016 Feb;78(2):265-73. doi: 10.1227/NEU.0000000000001040. PubMed PMID: 26421589.

<sup>2)</sup>

Zhang H, Zhang B, Li S, Liang C, Xu K, Li S. Whole brain CT perfusion combined with CT angiography in patients with sub- arachnoid haemorrhage and cerebral vasospasm. *Clin Neurol Neurosurg*. 2013;115:2496-501.

<sup>3)</sup>

Jabbarli R, Gläsker S, Weber J, Taschner C, Olschewski M, Velthoven VV. Predictors of severity of cerebral vasospasm caused by aneurysmal subarachnoid hemorrhage. *J Stroke Cerebrovasc Dis*. 2013;22:1332-9.

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