

# TRANSCRANIC DOPPLER MONITORING IN REVERSIBLE CEREBRAL VASOCONSTRICTION SYNDROME : A CLINICAL CASE

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Reversible cerebral vasoconstriction syndrome (RCVS) has been a poorly defined clinical entity until 2007. A number of different disorders characterized by episodes of thunderclap headache and reversible cerebral vasospasm are grouped under the same definition and it is generally associated with good outcome. The main reported complications are: non-aneurysmal subarachnoid haemorrhage, seizures, transient ischemic attacks, cerebral infarctions and posterior reversible encephalopathy syndrome (PRES) 1 .

We present the clinical case of a 31 y.o. man with an history of recurrent headaches who presented to ER with acute migraine (refractory to NSAIDs), hypertension, photophobia, blurred vision and severe mental status alterations. The patient, after the orotracheal intubation, undertook a cerebral CT scan and MRI showing acute ischemic lesions, diffuse and multiple irregularities of the main arteries compatible with RCVS; PRES was also observed. Transcranial Doppler (TCD) demonstrated increased mean flow velocity of left MCA, and right ACA and PCA. Endovenous nimodipine infusion was started at the admission in ICU. A daily monitoring with TCD was performed allowing a prompt recognition of a recurrent vasospasm (day 3) requiring an urgent cerebral angiography and intra-arterial nimodipine infusion (2 mg in the cleft carotid artery) with an immediate restoration of the normal cerebral flow. The patient was extubated (day) and discharged from ICU (day) with full clinical recovery.

Conclusion

RCVS may represent a clinical emergency also leading to life-threatening scenarios and severe complications. Transcranial Doppler is a useful, non-invasive, reproducible imaging technique allowing a bedside monitoring of deeply sedated patients. In our case TCD was a decision making tool to treat the recurrence of vasospasm in a young patient and avoiding related

potentially permanent consequences.

