

# The intra and extra cranial veins in relationship with chronic migraine

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## Background

Migraine with and without aura is a widespread disease characterized by recurrent pain involving only one side of the head matched by nausea, vomiting, photophobia and/or hyperacusia.<sup>1</sup> It is defined as chronic if present for at least 15 days/month for more than 3 months.

## Methods

From 2013 to 2019, 30 persons were examined (13 males, 17 females, mean age 43 yrs, SD  $\pm 18.57$ ) diagnosed with chronic cerebrospinal venous insufficiency (CCSVI) and migraine; 7 underwent jugular balloon angioplasty. 15 performed an intracranial MRI venography and an Echo Colour Doppler (ECD)<sup>2</sup> of the Internal Jugular Veins (IJV)<sup>3,4</sup> resulting positive for venous anomalies and stenosis; 11 per-

formed an intracranial MRI venography with positive results for venous anomalies; 4 performed ECD of IJV, resulting positive for stenosis. Of the people observed, 23 are in medical-treatment, and 7 underwent jugular balloon angioplasty.

## Results

In this group, abnormalities of the cranial venous circulation are associated with chronic migraine.

In 3 persons (2 males, mean age 16 yrs) with cyclical vomiting associated with migraine, it was found: in 2 positivity both to the MR venography and to the ECD, 1 was negative to MR venography, but positive to the ECD. Of this subgroup, 2 underwent balloon angioplasty of the IJV with symptom improvements.

In 5 persons (4 females, mean age 45 yrs) with migraine, it was found: positivity in both the MR venography and the ECD, 1 did not perform MR venography, but was positive ECD. All 5 underwent jugular balloon angioplasty as a therapy for CCSVI with symptom improvements in 4.

## Conclusions

These preliminary observations suggest the hypothesis of a possible association between migraine and intra and extra cranial venous anomalies.<sup>4</sup> Further studies will be needed, to verify the efficacy of jugular angioplasty as an additional therapy for chronic migraine.

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