Reviewer's report

Title: Internal jugular venous abnormalities in transient monocular blindness

Version: 2 Date: 26 November 2012

Reviewer: Greg Zaharchuk

Reviewer's report:

To the authors

This is a case control study of 23 patients with non-cardiogenic, frequent TMB and 23 age/sex matched subjects, evaluating the caliber of their internal jugular veins, with the hypothesis that the group with TMB would have more stenosis of the IJ’s. This builds on their prior work suggesting that venous hypertension may be related to cases of TMB that do not have an obvious arterial source. They found that IJ stenosis was more common in TMB patients in the left upper IJ and the bilateral mid IJ levels.

Strengths of the study: Case control, blinded design. Interesting thought that changes in the neck might be related to ocular symptoms. Relevance to CCSVI.

Drawbacks: Relatively small size, reliance on contour abnormalities rather than flow rates, question of association versus cause remains unclear.

Major Compulsory Revisions:

1. Methods, p 8: The authors state that two readers evaluated the studies. Did they review each together and come to consensus? Or did one reader read some and another read the others? If they both read all exams, the authors should provide a measure of their agreement.

2. Methods, p 8: No measurements performed at the low IJ level, despite the fact that images were acquired down to the thoracic inlet. This might be interesting, given that this is a common site of caliber narrowing of the IJ.

3. Methods, p 8: The authors should account for doing multiple comparisons, perhaps by considering a lower p value for significance.

4. General: The authors state that all the TMB patients had neck ultrasound studies. Did the results of this correlate in any way with the MRI findings?

5. General: Was there any relationship between the sidedness of the TMB attacks and the stenosis seen in the IJV’s?

Minor Essential Revisions:

6. Methods, p 8: No need to discuss the T2-weighted or DWI images as they were not used in the analysis.
7. Discussion, p 10: Sentence starting “Also, compression/stenosis at the upper level of IJV…” is not clear as written.

Discretionary Revisions

8. Background, p 5: Could be shortened. No need to review their prior work so thoroughly – it could be referenced.

9. Methods, p 8: No measurements performed at the low IJ level, despite the fact that images were acquired down to the thoracic inlet. This might be interesting, given that this is a common site of caliber narrowing of the IJ.

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests