Reviewer's report

Title: An anatomy-based lumped parameter model of cerebrospinal venous circulation: can an extracranial anatomical change impact intracranial hemodynamics?

Version: 3
Date: 14 March 2015

Reviewer: Paolo Zamboni

Reviewer's report:

The Authors should be congratulated for the completeness of their manuscript, addressed in contributing to the answer of a key question: the impact of restricted extracranial outFlow to intracranial haemodynamics

Minor essential revision
1. Discussion. Limitations of the Study have to be discussed in greater detail. The application of Poiseulle law implies the use of one value of extracranial veins CSA/Diameter. To the contrary, IJV pulse wave clearly demonstrates significant variations of CSA along the cardiac cycle. Can such variation affect calculations made by the Authors? Recent proposed non invasive assessment of pulsed jugular flow should be taken into consideration in discussing this point.

Discretionary Revisions
2. Discussion. Is the detailed analysis of collateral veins useful to the model and/or application of the model in clinical practice?

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare no competing interests