

University of Groningen

Hemodynamics in the circle of Willis and prognostic factors in subarachnoid hemorrhage

Shen, Yuanyuan

DOI:
[10.33612/diss.192286680](https://doi.org/10.33612/diss.192286680)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2021

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
Shen, Y. (2021). *Hemodynamics in the circle of Willis and prognostic factors in subarachnoid hemorrhage*. University of Groningen. <https://doi.org/10.33612/diss.192286680>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

PROPOSITIONS

accompanying the Phd thesis

Hemodynamics in the circle of Willis and prognostic factors in subarachnoid hemorrhage

1. The configuration of the circle of Willis influences the perfusion territories of cerebral feeding arteries and should therefore be considered in the management of carotid artery disease. (This thesis)
2. The global hemodynamic effect is a hemodynamic phenomenon in the circle of Willis, where each individual arterial segment in the circle of Willis has its own hemodynamic contribution to other segments and vice versa. (This thesis)
3. Hemodynamically, the configuration of the circle of Willis should be studied as a continuous variable rather than as a categorical variable. (This thesis)
4. When a numerical model of cerebral hemodynamics is applied in a clinical study, it is important that its measurement error is smaller than the minimal clinically important difference. (This thesis)
5. The proposed numerical model can reproduce the hemodynamics in the circle of Willis in both healthy people and in SAH-patients, but less accurate in SAH-patients who developed delayed cerebral ischemia. (This thesis)
6. In patients with SAH, myosteatosis is associated with higher WFNS grades at admission compared to patients without myosteatosis. (This thesis)
7. To be generally accepted, a system must be practical to use in a wide range of hospitals and by staff without special training. But the search for simplicity must not be the excuse for seeking absolute distinctions where none exist. (Graham Teasdale / Bryan Jennett)
8. Whenever you feel like criticizing anyone, just remember that all the people in this world haven't had the advantages that you've had. (F. Scott Fitzgerald, *The Great Gatsby*)
9. Constant dripping wears away a stone. (Idiom)
10. 长风破浪会有时, 直挂云帆济沧海。(李白)

A time will come to ride the wind and cleave the waves, I'll set my cloud-white sail and cross the sea which raves. (Li Bai)

Yuanyuan Shen

1 October 2021