

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Journal of Biomechanics

journal homepage: www.elsevier.com/locate/jbiomech

Corrigendum

Corrigendum to “Modelling the effects of cerebral microthrombi on tissue oxygenation and cell death” [J. Biomech. 127 (2021) 110705]

Yidan Xue^{a,*}, Wahbi K. El-Bouri^{a,b}, Tamás I. Józsa^a, Stephen J. Payne^a^a Institute of Biomedical Engineering, Department of Engineering Science, University of Oxford, Oxford, UK^b Liverpool Centre for Cardiovascular Science, Department of Cardiovascular and Metabolic Medicine, University of Liverpool, Liverpool, UK

The corresponding author (YX) regrets the presence of minor errors in the last paragraph of Section 3.3. This paragraph should be updated as below with major changes indicated in bold.

Note that at a 10% blockage fraction, there are 56 microthrombi inside a 375- μm capillary cube with a total volume of 8.43×10^{-9} mL, assuming that each vessel is blocked by a single spherical thrombus with diameter equal to the diameter of the corresponding vessel. This results in a microthrombi volume of 1.60×10^{-4} mL per mL cerebral microvascular volume. If we assume that there are micro-embolisms in a territory of 100 mL fed by middle cerebral artery, the total microthrombi volume will be 1.60×10^{-2} mL. Assuming that the volume of a thrombus is 0.17 mL (Baek et al., 2017) and that 25% of clot fragments

are transported into capillary networks, the total microthrombi volume will be 4.25×10^{-2} mL, which is about **2.66** times of the volume predicted from blocked capillaries. The thrombus volume predicted from our *in silico* models at micro-scale is thus in the same order of magnitude of that *in vivo* at macro-scale. If all 25% of clot fragments reach the capillary bed, it is likely to cause occlusions in 26.6% of capillaries that will lead to a tissue hypoxic fraction of 94.4% based on Eq. (7).

Fortunately, the reported corrections in fact lead to a better agreement between simulations and clinical data and affect no other parts of this paper. The authors would like to apologise for any inconvenience caused.

DOI of original article: <https://doi.org/10.1016/j.jbiomech.2021.110705>.

* Corresponding author.

E-mail address: yidan.xue@eng.ox.ac.uk (Y. Xue).<https://doi.org/10.1016/j.jbiomech.2022.111070>

Available online 30 March 2022

0021-9290/© 2022 Elsevier Ltd. All rights reserved.