

Editorial – The 5th MIDAS Microcirculation Meeting

New developments in clinical microcirculation imaging

Christian Lehmann

*Department of Anesthesia, Pain Management and Perioperative Medicine,
Dalhousie University, Halifax, NS, Canada*

During its 36. Annual Meeting from June 9.-10., 2017, in Greifswald (Germany), the German Society for Clinical Microcirculation and Hemorheology hosted the 5th MIDAS Microcirculation Meeting (3M). MIDAS stands for Microcirculation Diagnostics and Applied Studies research group, founded 2012 in Halifax (Canada). This international group consists of basic scientists and clinical researchers with a special background in anesthesiology and intensive care medicine interested in the advancement of microcirculatory studies. Members of the group are from Germany, Czech Republic, Estonia, France, Egypt and Bangladesh.

The 2017 meeting was devoted to new developments in microcirculation imaging regarding experimental methods and their clinical applications. In the introduction to the MIDAS meeting, a new study from Cairo (Egypt) funded by Grand Challenges Canada evaluating the sublingual microcirculation in patients with septic shock was presented [1]. In this study, video recordings of the sublingual microcirculation were analysed with novel automated software and the results compared to data obtained by standard semi-automated software. The MIDAS group is enthusiastic about the advent of automated software for the otherwise time-consuming analysis of microcirculatory recordings. Automated software represents a breakthrough for the use of microcirculation monitoring in clinical patients. We expect an exponential increase in scientific microcirculation studies in the future due to this novel technology.

Another new development in clinical microcirculation imaging is the glycocalyx research. In this issue of the journal, Dr. Cerny (Czech Republic) [2] reports about first results of a major glycocalyx project supported by a Czech national research grant. This project includes animal experiments and clinical trials. In collaboration with researchers from Halifax (Canada), glycocalyx was observed for the first time in zebra fish – a unique model for microcirculation research because of the transparency of the fish, allowing for cellular observations without surgery or staining.

Dietrich Henzler (Germany) [3] discussed in his talk the hurdles to take before microcirculation measurements can be introduced into bigger scientific studies and the clinical routine. In his paper, included in this issue of the journal, he concludes that once the validity, i.e. any improvement in patient's outcomes attributable to microcirculation measurements, can be established, clinical measurement of microcirculation could become part of routine treatment of patients with sepsis, inflammation and shock.

The last presentation of the meeting was given by Dr. Kern from Berlin (Germany) [4]. He talked about the challenges and chances for microcirculation monitoring and research in non-university

departments of anesthesia, surgery, obstetrics and critical care. Community hospitals have a lot to offer for microvascular studies – when feasible (technology) and fast (automated) methods are available, as discussed above (see his publication in this issue of the journal).

The MIDAS research group would like to thank the organizers of the Annual Meeting of the German Society for Clinical Microcirculation and Hemorheology for the excellent conditions for the group meeting and the opportunity to publish the proceedings in this journal.

References

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