Title: Are we ready for Optimal CPP-oriented management of TBI patients?

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Objective: Monitoring cerebral autoregulation (CA) is important for TBI patients,[1] as impaired CA correlates with poor outcome. [2 3] Today, automated algorithms allow to assess CPP for which autoregulation is best preserved (CPPopt) continuously and present it at the bedside[5 6]. Individualising CPP treatment using CPPopt is attractive and this has been recognised in published guidelines. However there are no specifications for its use clinically and it has therefore never been prospectively evaluated[1]. Numerous logistic, technical, feasibility and safety questions remain before the idea of selecting individual CPP treatment targets based on the state of CA [4] can be incorporated into clinical practice. How far are we from strict guidelines on the incorporation of this methodology into TBI protocols?

Design: Literature review

Subjects:

Methods: Systematic review

Results: The feasibility of CPPot-guided therapy has only been evaluated retrospectively and in non-clinical ways, whereas no studies exist on its safety. A prospective investigation of CPPopt-guided therapy has been initiated with '*CppOpt Guided Therapy: Assessment of Target Effectiveness*' (COGiTATE), a multicenter randomized trial assessing feasibility and safety of a continuous CA monitoring-based therapy in adult TBI patients.

Conclusions: COGiTATE seems to be the first step to define the physiological effect of targeting CPPopt and should pave the way toward establishing the exact protocol of CPPopt-oriented therapy and the phase III study.

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