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LETTER TO THE EDITOR

acta Anaesthesiologica Scandinavica

Iatrogenic cerebral gas embolism, pneumocephalus and the concept of retrograde cerebral venous gas embolism

Dear Editor,

We read with great interest the systematic review of iatrogenic cerebral gas embolism of Hatling et al[1] and we are in complete agreement with the authors' conclusion that awareness of cerebral gas embolism should be spread widely through publicizing the spectrum of procedures that can cause this often-fatal complication of medical procedures. They have an appropriate title, but in the text of the article should refer to gas rather than air embolism. It is well-known that other gases, for example carbon dioxide, argon and oxygen, can cause embolism.

The search strategy followed in this project seems very comprehensive. We do, however, suggest for future purposes to include also search terms such as "pneumocephalus" to not miss a typical other iatrogenic pattern as typically described in neurosurgery.[2] Moreover, a keynote publication that was also missed is the series published by Beevor and Frawley.[3] Like Bessereau,[4] they have shown conclusively the benefit of hyperbaric oxygen if given in good time (6-8 hours) for this condition that is much more common than most people realize.

Therefore, we would also like to emphasize the concept of "retrograde" cerebral venous gas embolism.[5,6] Recognition of retrograde cerebral venous gas embolism (RCVGE) has made it easier to understand how some cases respond to hyperbaric treatment more than the ideal window of 6-8 hours. The main reason for this correspondence is to draw the attention of clinicians who read the valuable review to the possibility that RCVGE allow a bigger window of opportunity of treatment but also the possibility that a patient with signs of air in the venous system may still deteriorate in due time. The opportunity for referral to hyperbaric oxygen therapy should not be missed.

We agree with the authors' suggestion of a consistent approach to improve the quality of case reports. The need for international collaboration on a prospective observational or pragmatic study on the management of cerebral gas embolism cannot be over emphasized. Anyone interested in such a collaboration should please contact the British Hyperbaric Association for further information. https://www.ukhyperbaric.com/contact/

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CONFLICT OF INTEREST

None.

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