

LETTER TO THE EDITOR

Inappropriate suggestion of benefit from hyperbaric oxygen for spinal cord injury

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Tofuku *et al.*¹ report a rare case of spinal cord infarction occurring as a complication of endoscopic variceal ligation. In their report, they mention that the patient was treated with hyperbaric oxygen (HBO). They asserted that 'HBO is an attractive method of treatment that has frequently been used for patients with cerebral ischaemia', and that 'although there are no clear guidelines for the treatment of spinal cord infarction, the present case suggests the usefulness of HBO treatment in patients with spinal cord infarction.'

HBO has proved to be useful in many conditions, and there are theoretical reasons and animal studies to suggest that it may have potential for benefit in patients with central nervous system damage. Its use, however, is not without complication, it is very costly to provide, and there are major logistical issues involved in delivering this treatment to patients with an acute spinal cord lesion, whatever the aetiology.

With the above in mind, there are very serious concerns about the claim made by Tofuku *et al.*¹ regarding the use of HBO treatment in cerebral ischaemia and their proposal about HBO use in patients with spinal cord ischaemia.

Although HBO has been used in patients with cerebral ischaemia, its use is not routine in clinical practice. A Cochrane review concluded that there is little evidence to support the use of HBO for stroke patients.² The claim by Tofuku *et al.* that HBO has been frequently used in patients with cerebral ischaemia is misleading and inappropriate based on current available evidence.

The suggestion that their case report provides support for the usefulness of HBO in patients with spinal cord ischaemia is contrary to the principles of evidence based medicine. A literature search on this topic in Medline (1950–2008) and Embase (1980–2008) identified several case series of patients

with traumatic spinal cord injury treated with HBO, with none involving patients with spinal cord ischaemia. All of the studies located had major methodological shortcomings.

If HBO is to be used routinely in patients with spinal cord injury, including ischaemia, then this should ideally be offered only as part of a well designed multi-centre randomized controlled clinical trial that is established following the principles of good trial design, including those recently proposed for patients with spinal cord injury.^{3,4} Only by conducting such a trial will it be possible to distinguish between spontaneous recovery and a specific treatment effect of HBO. Until such a trial is conducted, authors should refrain from making misleading claims about benefits of HBO in patients with spinal cord injury.

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