Letters to the Editor

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Same-day emergency care

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Editor – I enjoyed the recent article 'How do we identify acute medical admissions that are suitable for same-day emergency care'. From a secondary care perspective, it was both clear and comprehensive while acknowledging that there were unanswered questions.

A crucial issue not focused on was how to integrate these patients with primary care. Achieving this poses many challenges, not only because are there workforce issues but also because there has been a divergence away from shared decision making over many years now. One model, published in your journal, offered a partial solution. 2

Algorithms and guidelines have allowed a huge amount of progress to be made. Significant challenges remain, however, if good communication, motivation and clinical judgement are not incorporated into the model. Future training of health professionals on both sides of the divide needs to focus on these qualities.

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References

- 1 Atkin C, Riley B, Sapey E. How do we identify acute medical admissions that are suitable for same day emergency care. Clin Med 2022;22:131–9.
- 2 Houghton M. Acute Medicine an alternative take. Clin Med 2011;11:26–7.

Hyperbaric oxygen therapy for the treatment of long COVID

DOI: 10.7861/clinmed.Let.23.1.2

Editor – We raise concerns about the article by Robbins *et al* describing hyperbaric oxygen therapy (HBOT) for the treatment of long COVID.¹

The NHS commissions HBOT for treatment of decompression sickness and gas embolism at 11 facilities. The use of HBOT for these diseases has both evidence of efficacy and a plausible mechanism of action: increased ambient pressure compresses

the free gas in the patient (according to Boyle's Law) and causes it to dissolve in tissues (according to Henry's Law), while breathing 100% oxygen creates a gradient for elimination of inert gas (usually nitrogen).

A number of other hyperbaric facilities offer private HBOT for treatment of diseases for which there is neither evidence of efficacy nor a plausible hypothesis for a therapeutic mechanism. These include Alzheimer's disease, autism, cancers, depression, HIV/AIDS, Lyme disease and Parkinson's disease. Some facilities provide HBOT for multiple sclerosis although 12 randomised trials have identified no clinically significant benefit.²

This report states that 10 patients received 10 sessions of HBOT at 2.4 atmospheres. Only one author, who works at the Midlands Diving Chamber, treated the patients and he performed the preand post-treatment assessments of fatigue and cognitive scoring. The remaining 10 authors, who work at the University Hospitals Coventry and Warwickshire NHS Trust, analysed the data (which we estimate should have taken one person one day). The article reports that HBOT yielded significant improvements in fatigue scale, global cognition, executive function, attention, information processing and verbal function. The authors conclude that the results suggest potential benefits of HBOT in the treatment of long COVID.

We believe it is unacceptable that this experimental non-comparative efficacy trial had ethics approval only for the data analysis. It did not have ethics approval for the exposure of patients to the unproven use of HBOT in a clinical trial. If the patients were not told that they were participating in a research clinical trial, they did not give adequately informed consent.

HBOT involves risks of barotrauma to lungs and ears, and oxygen-induced pulmonary pneumonitis and neurological toxicity. The latter causes convulsions with the risk of aspiration for patients wearing a face mask or hood in the hyperbaric chamber.

The trial was not blinded for either patients or the treating doctor, who performed the assessment in the private facility. Whether the research was funded by the subjects paying for 'private treatment' is not stated.

Placebo effects are likely as HBOT facilities are highly technical. Patients are locked in a hyperbaric chamber and usually wear a mask or hood. They experience pressure sensations in their ears and temperature alterations as ambient pressure in the chamber changes.

The Midlands Diving Chamber now cites this paper on its website as evidence of efficacy of HBOT in long COVID to attract paying customers. 3

We believe that Clinical Medicine should publish an expression of concern about this paper whilst the journal investigates whether there was ethical approval for the actual research and not just the analysis. If there was not, the article should be retracted.