

### HYPERBARIC OXYGEN THERAPY

#### *To the Editor:*

I found Dr. Samkoff's update on the treatment of multiple sclerosis (MS)<sup>1</sup> to be complete except for a comment about the controversial subject of using hyperbaric oxygen (HBO) therapy to treat this disorder.

There is some theoretical evidence, coupled with the pathophysiology of MS, indicating that HBO may benefit patients with MS. This evidence includes the reduction of perineural edema and perturbation of leukocyte adherence to the arterial endothelium, with subsequent prevention of the release of toxic, reactive oxygen species.

Clinically, there have been mixed reports about the effectiveness of using HBO as treatment of MS. Fischer and colleagues reported a positive, statistically significant effect with use of HBO in a randomized, controlled trial.<sup>2</sup> Some clinicians continue to use HBO to treat MS based on this study and their clinical observations of improvement in their patients.

Consequently, I believe that HBO should have been mentioned in the review for completeness sake and that, perhaps, there should be another "look" at its effectiveness, if any.

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#### *In reply:*

I thank Dr. Strauss for his interest and comments on my recent review article on the current management of MS.<sup>1</sup> He raises a thoughtful question on the therapeutic use of HBO for patients with MS. There have been numerous placebo-controlled and open-label studies on the effects of HBO in MS. HBO treatments have been administered at different pressure levels for variable durations for up to 24 months. Unfortunately, the most rigorous investigations found no significant clinical or labora-

tory benefit based on disability outcome scores, results of magnetic resonance imaging, evoked potentials, or lymphocyte population measures.<sup>3-6</sup> Subgroup analyses failed to identify patients with meaningful favorable outcomes. However, 2 studies did report short-term improvement in bladder function.<sup>5,7</sup>

Given the lack of evidence-based data supporting the benefit of HBO in MS, it is doubtful that future studies will be conducted.

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#### References

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