

Hyperbaric oxygen treatment for post-radiation central nervous system injury: a retrospective case series.

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Abstract

Increased use of radiation therapy and increasing life spans following radiation treatment has led to an increase in the finding of post-radiation central nervous system injury in patients who have previously undergone radiation treatments. At this time, information regarding treatment for patients suffering from this serious side effect is limited and not readily available. It is imperative to examine possible treatment options, complications and success rates for these patients. This retrospective review will look at 10 patients who underwent hyperbaric oxygen therapy for post-radiation injury to the central nervous system. Review and investigation of the subjective, clinical and radiologic outcomes of these patients was conducted. It was determined that for patients with post-radiation central nervous system injury it is important to distinguish the exact diagnosis for each patient. For those patients with radiation necrosis, conclusion was made that hyperbaric oxygen (HBO2) therapy does lead to improvement in subjective, clinical and radiologic outcomes. However, the results were not consistent across all patients. For those patients with non-specific delayed radiation injury, findings showed that HBO2 does not lead to any improvement. Therefore, we conclude that for those patients who have been diagnosed with radiation necrosis of the central nervous system, we recommend HBO2 therapy as a potential treatment option for some patients.