



Title **Indications for Hyperbaric Oxygen Therapy: Update**

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Aim

To update a previous report (published in 2000) on the 13 recognized indications for hyperbaric oxygen (HBO) therapy.

Conclusions and results

AETMIS concludes that the recommended indications for HBO therapy remain basically the same. For other conditions, the evidence does not establish that HBO therapy is effective. However, it may be an optional modality for treating idiopathic sudden sensorineural hearing loss during the first few weeks after onset, stage IV neuroblastoma, pneumatosis cystoides intestinalis, and acute ischemic ophthalmological disorders. It remains an experimental treatment for cerebral palsy and autism.

Recommendations

Based on the evidence, HBO therapy is recommended in the prevention of osteoradionecrosis after tooth extraction in an irradiated area (evidence level B, no new data); as first-line therapy for decompression sickness (evidence level C) and complicated venous or arterial gas embolism (evidence level C, no new data); as second- and third-line therapy for carbon monoxide poisoning (evidence level B), gas gangrene (evidence level C, no new data), infection necroses other than gas gangrene (level of evidence C, no new data), mandibular osteoradionecrosis, radionecrosis of soft tissues and musculocutaneous grafts after major surgery in an irradiated area, hemorrhagic radiation proctitis (level of evidence B) and hemorrhagic radiation cystitis (evidence level C, no new data), problem wounds (level of evidence B), skin and musculocutaneous grafts in ischemic areas (evidence level B, no new data), refractory osteomyelitis (evidence level C), intracranial abscess (evidence level C), ischemic and traumatic lesions (evidence level B, no new data); and as an optional therapy for thermal burns (evidence level C, no new data) and specific anemias (evidence level C, no new data).

Methods

The literature published from January 2000 to August 2007 was thoroughly reviewed. Given the paucity of new quantitative and qualitative studies published since 2000, several of which are of poor quality, AETMIS completed much of its assessment by expert consensus. The two main ones are the Hyperbaric Oxygen Therapy Committee of the Undersea and Hyperbaric Medical Society (UHMS) and the European Committee for Hyperbaric Medicine (ECHM). Three levels of evidence were used: A (high), B (medium), and C (low).

Further research/reviews required

For most indications, the parameters for administering HBO therapy have yet to be determined. New studies are required to justify the systematic use of HBO therapy for idiopathic sudden sensorineural hearing loss. Few indications for hyperbaric oxygen therapy have been rigorously studied, and evidence remains scarce. Consequently, new studies of better methodological quality and further clinical experiments should be conducted.