Hyperbaric oxygen therapy

Record Status
This is a bibliographic record of a published health technology assessment from a member of INAHTA. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' objectives
This report evaluates the safety and effectiveness of HBOT for the following indications:
- thermal burns;
- diabetic wounds including diabetic gangrene and diabetic foot ulcers;
- nondiabetic wounds and decubitus (or pressure) ulcers;
- soft tissue infections including necrotising fasciitis, Fournier's gangrene, and necrotising arachnidism;
- actinomycosis;
- soft tissue radionecrosis;
- osteomyelitis;
- osteoradionecrosis;
- skin graft survival;
- multiple sclerosis and cerebral palsy;
- cardiovascular conditions including acute myocardial infarctions, cerebrovascular disease, and peripheral obstructive arterial disease (POAD);
- soft tissue injuries including acute ankle sprains and crush injuries;
- facial paralysis (Bell's palsy);
- cluster and migraine headaches;
- Legg-Calve-Perthes disease (necrosis of the femoral head, especially prevalent in children);
- sudden deafness and acoustic trauma;
- Crohn's disease;
- osteoporosis;
- cancer;
- carbon monoxide poisoning.

Authors' conclusions
MSAC recommended that public funding for hyperbaric oxygen therapy should be supported for hyperbaric oxygen therapy (HBOT) administered in either a multiplace or monoplace chamber, as appropriate, for the following indications:
- decompression illness,
- gas gangrene,
- air or gas embolism.

HBOT is widely accepted as standard clinical care in the management of these life-threatening conditions for which there are limited alternative treatment options. There is evidence that HBOT is effective in promoting wound healing, and reducing the length of hospital stays and the likelihood of major amputations in patients with diabetic wounds. There may also be cost savings associated with these treatment benefits.

Necrotising soft tissue infections including necrotising fasciitis and Fournier's gangrene, and the prevention and treatment of osteoradionecrosis. These are serious conditions in which HBOT provides a non-invasive treatment option which may have a beneficial effect and offer cost savings. Further studies are required to provide more conclusive evidence of an effect but are difficult to undertake due to the ethical and practical constraints of conducting trials in these conditions. Public funding should be continued for HBOT use in these conditions until conclusive evidence becomes available that indicates it is not effective or that other treatments are preferable and more cost-effective.

Since there is currently insufficient evidence pertaining to HBOT use in the following indications, MSAC recommended that public funding should not be supported for HBOT administered in either a multiplace or monoplace chamber, for:
- thermal burns,
- non-diabetic wounds and decubitus (or pressure) ulcers,
- necrotising arachnidism,
- actinomycosis,
- soft tissue radionecrosis,
- osteomyelitis,
- skin graft survival,
- multiple sclerosis and cerebral palsy,
- cardiovascular conditions including acute myocardial infarctions, cerebrovascular disease, and peripheral obstructive arterial disease (POAD),
- soft tissue injuries including acute ankle sprains and crush injuries,
- facial paralysis (Bell's palsy),
- cluster and migraine headaches,
- Legg-Calve-Perthes disease (necrosis of the femoral head, especially prevalent in children),
- sudden deafness and acoustic trauma,
- Crohn's disease,
- osteoporosis,
- cancer,
- carbon monoxide poisoning,
- cyanide poisoning,
- head trauma,
- cerebrovascular diseases,
- acquired brain injury,
- cognitive impairment,
- senile dementia,
- glaucoma,
- keratoconjunctivitis,
- HIV infection,
- anaemia from exceptional blood loss,
- insulin-dependent diabetes mellitus,
- facial neuritis,
- arthritis,
- spinal injuries and non-union of fractures.

MSAC has not considered safety standards for HBOT services administered in either multiplace or monoplace chambers, in detail, but endorses a standard for facilities, staffing and training which meets that in development by
Standards Australia.

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Actinomycosis; Bell Palsy; Burns; Carbon Monoxide Poisoning; Cardiovascular Diseases; Cerebral Palsy; Cerebrovascular Disorders; Crohn Disease; Diabetes Mellitus; Headache Disorders; Hearing Disorders; Hyperbaric Oxygenation; Legg-Perthes Disease; Multiple Sclerosis; Neoplasms; Osteomyelitis; Osteoporosis; Osteoradionecrosis; Pressure Ulcer; Soft Tissue Infections; Soft Tissue Injuries; Wounds and Injuries

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