

Hyperbaric oxygen and wound healing.

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Abstract

Hyperbaric oxygen therapy (HBOT) is the use of 100% oxygen at pressures greater than atmospheric pressure. Today several approved applications and indications exist for HBOT. HBOT has been successfully used as adjunctive therapy for wound healing. Non-healing wounds such as diabetic and vascular insufficiency ulcers have been one major area of study for hyperbaric physicians where use of HBOT as an adjunct has been approved for use by way of various studies and trials. HBOT is also indicated for infected wounds like clostridial myonecrosis, necrotising soft tissue infections, Fournier's gangrene, as also for traumatic wounds, crush injury, compartment syndrome, compromised skin grafts and flaps and thermal burns. Another major area of application of HBOT is radiation-induced wounds, specifically osteoradionecrosis of mandible, radiation cystitis and radiation proctitis. With the increase in availability of chambers across the country, and with increasing number of studies proving the benefits of adjunctive use for various kinds of wounds and other indications, HBOT should be considered in these situations as an essential part of the overall management strategy for the treating surgeon.

KEYWORDS:

Air embolism; compartment syndrome; crush syndrome; decompression sickness; diabetes mellitus; diabetic foot; gas gangrene; hyperbaric; hyperbaric medicine; hyperbaric oxygen therapy; hyperbaric oxygenation; necrotising fasciitis; osteomyelitis; osteoradionecrosis; radiation injuries; radiation necrosis; reperfusion injury; soft tissue infections; surgical flaps; transcutaneous oximetry

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