Hyperbaric Oxygen Therapy and Surgery

S Afr J Surg 2001 Nov;39(4):117-21 (ISSN: 0038-2361)
MacFarlane C; Cronje FJ Gauteng Health Department, Emergency Medical Services, University of the Witwatersrand, Johannesburg.

Hyperbaric Oxygen Therapy (HBOT) therapy, that is the administration of 100% oxygen delivered under pressure, has a beneficial effect in several surgical conditions. Its use has been assessed and audited and its pharmacological effects demonstrated. It is appropriate for use in several surgical conditions as evidence-based therapy.

These are: (i) gas gangrene; (ii) crush injuries, compartment syndromes and acute traumatic ischemias; (iii) enhancement of healing in selected problem wounds; (iv) exceptional blood loss anaemia; (v) necrotising soft-tissue infections; (vi) refractory osteomyelitis; (vii) radionecrosis; (viii) compromised skin grafts and flaps; (ix) thermal burns; (x) intracranial abscess. HBOT therapy has been used inappropriately in the past; there is also lack of knowledge regarding its application, and scarce hyperbaric facilities.

Hyperbaric therapy, when properly supervised by a physician trained in its use, working closely with a surgeon, and ethically used for appropriate indications, can be a useful adjunct to surgical practice.