

J Postgrad Med, 2002

The role and effectiveness of adjunctive hyperbaric oxygen therapy in the management of musculoskeletal disorders.

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The management of musculoskeletal disorders is an increasing challenge to clinicians. Successful treatment relies on a wide range of multidisciplinary interventions. Adjunctive hyperbaric oxygen (HBO) therapy has been used as an orthopaedic treatment for several decades. Positive outcomes have been reported by many authors for orthopaedic infections, wound healing, delayed union and non-union of fractures, acute traumatic ischemia of the extremities, compromised grafts, and burn injuries. Severe side effects have also been reported with this therapy. To aid in the use of HBO therapy in orthopaedics, we reviewed 43 papers published in the past four decades and summarised the mechanisms, effectiveness, indications and contraindications, side effects, and cost impact of adjunctive hyperbaric oxygen therapy in the management of difficult musculoskeletal disorders. Adjunctive HBO therapy is an effective treatment modality for the management of some severe and refractory musculoskeletal problems. If appropriate candidates are carefully identified, hyperbaric oxygen is a limb- and sometimes life-saving therapy. HBO therapy significantly reduces the length of the patient's hospital stay, amputation rate, and wound care expenses. Thus, it is a cost-effective modality. A clinician must understand the side effects and risks of HBO treatment. Close monitoring throughout the treatment is warranted to minimise the risk to the patients.