

Hyperbaric oxygen and carbon monoxide poisoning: a critical review.

Stoller KP.

Hyperbaric Medical Center of New Mexico, 404 Brunn School Rd No. D/E, Santa Fe, NM
87505, USA. info@hbotnm.com

CO is likely to be the most common cause of poisoning worldwide and often results in persistent neuropathologic and cognitive sequelae. While the displacement of oxygen from hemoglobin by CO has overshadowed the myriad mechanisms by which CO causes injury, mere oxygen displacement has endured as the etiology of CO poisonings and perpetuated a cascade of misdiagnosis, misunderstandings and confusion regarding how and when to treat CO poisoning. Hyperbaric oxygen benefits the brain more than normobaric oxygen by, e.g. improving energy metabolism, preventing lipid peroxidation and decreasing neutrophil adherence. Randomized controlled trials have definitively shown hyperbaric oxygen as the only efficacious therapy for acute CO poisoning if delayed neurological sequelae are to be minimized. Normobaric oxygen should not be used between multiple hyperbaric oxygen treatments as this can contribute to toxicity. Hyperbaric oxygen seems to also have potential in the delayed treatment of CO poisoning using multiple treatments of low dose of oxygen; however, oxygen dosing issues are not yet fully understood for either acute or delayed treatment. It would behoove medical decision-makers to embrace this important tool and make it more accessible as well as helping to disseminate to the medical community what is now known from the available literature.

PMID: 17439699 [PubMed - indexed for MEDLINE]