

Normobaric and hyperbaric oxygen therapy for migraine and cluster headache

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ABSTRACT

Background

Migraine and cluster headaches are severe and disabling. Migraine affects up to 18% of women, while cluster headaches are much less common (0.2% of the population). A number of acute and prophylactic therapies are available. Hyperbaric oxygen therapy (HBOT) is the therapeutic administration of 100% oxygen at environmental pressures greater than one atmosphere, while normobaric oxygen therapy (NBOT) is oxygen administered at one atmosphere.

Objectives

To assess the safety and effectiveness of HBOT and NBOT for treating and preventing migraine and cluster headaches.

Search methods

We searched the following in May 2008: CENTRAL, MEDLINE, EMBASE, CINAHL, DORCTIHM and reference lists from relevant articles. Relevant journals were hand searched and researchers contacted.

Selection criteria

Randomized trials comparing HBOT or NBOT with one another, other active therapies, placebo (sham) interventions or no treatment in patients with migraine or cluster headache.

Data collection and analysis

Three reviewers independently evaluated study quality and extracted data.

Main results

Nine small trials involving 201 participants were included. Five trials compared HBOT versus sham therapy for acute migraine, two compared HBOT to sham therapy for cluster headache and two evaluated NBOT for cluster headache.

Pooling of data from three trials suggested that HBOT was effective in relieving migraine headaches compared to sham therapy (relative risk (RR) 5.97, 95% confidence interval (CI) 1.46 to 24.38, $P = 0.01$). There was no evidence that HBOT could prevent migraine episodes, reduce the