HBOT in AIDS

There are 40,000 Americans diagnosed each year with HIV infection, and The Centers for Disease Control and Prevention estimates approximately one-fourth are 21 years old or younger. The use of HBOT in the management of opportunistic infections and vascular insufficiencies commonly associated with AIDS has been extensively studied. There is no doubt that HBOT helps the secondary infections in AIDS patients and thus both enhances and extends life of people with AIDS. Pharmaceutical and HBOT are not mutually exclusive, in fact HBOT has been used adjunctively to enhance the effectiveness of antibiotic and antifungal therapies for the past two decades. In AIDS, the addition of HBOT reduces the likelihood of hepatic toxicity related to multiple medications and may enhance the therapeutic effect of the regimen.

HBOT has been demonstrated to relieve the debilitating chronic fatigue associated with HIV/AIDS (Reillo MR. [1993] Hyperbaric oxygen therapy for the treatment of debilitating fatigue associated with AIDS. J Assoc Nurses AIDS Care, 4: 33-38. Also see the Steinhart et al abstract printed below) as well as decreasing Tumor Necrosis Factor (TNF), which increases with HIV viremia.

One study reported that HBOT decreased the HIV viral load in infected peripheral blood mononuclear cells (PBMCs), and few viruses entered uninfected PBMCs (Reillo MR, Altieri RJ [1996]. HIV antiviral effects of hyperbaric oxygen therapy. J Assoc Nurses AIDS Care 7:43-45); however, the direct anti-HIV effect will have to be verified by other researchers in this field. Nevertheless, the significance that HBOT may have direct anti-HIV effects is important in light of the new "Guidelines for Use of Antiretroviral Agents in HIV-Infected Adults and Adolescents," released in February 2002.

The guidelines state that antiretroviral therapy is not recommended in an asymptomatic patient whose CD4-positive T-cell count is above 350 cells/μL and the plasma HIV RNA level is less than 55,000 copies/ml by RT-PCR, given both the physical and psychological toll of therapy. HBOT would be an ideal intervention in the individual recently infected with HIV because it has the potential of decreasing viremia, and decreases the microvascular and neurovascular damage occurring as the initial infection progresses throughout the body.

Acute microvascular and macrovascular peripheral insufficiency occurs in the presence of various acute infectious diseases, including HIV, HPV, HHV-6A, HHV-8, and syphilis, as well as chronic conditions such as diabetes mellitus, coronary artery disease, and chronic obstructive pulmonary disease (COPD). Regardless of the underlying cause, HBOT is recognized as a standard medical treatment, and microvascular and neurovascular damage occurs in all patients with HIV.
In the nonsmoking, healthy adult, oxygen saturation's are 98-100% without HBOT; in patients with AIDS, pulse oximetry baselines of 90% are common. It is well documented that hypoxia occurs with HIV and herpetic infections, which attack the circulatory and neurovascular systems. Changes in tissue coloration (especially of the hands and feet), which are often aggravated by temperature changes, occur in the HIV-positive person. HBOT reverses these symptoms and increases circulatory perfusion.