

Effective elimination of long-term radiation damage

A part of cancer treatment is also radiation therapy, which not only kills carcinogenic cells, but also damages healthy ones.

According to UCLA Health website more than 11 million people living in the U.S. today have been diagnosed with cancer, and about half of them have received radiation therapy (radiotherapy). While improved radiotherapy techniques have increased treatment precision and reduced side effects caused by radiotherapy, the high doses of radiation used to kill cancer cells may still cause long-term damage to nearby healthy cells in some patients. By helping the blood carry more oxygen to affected areas, hyperbaric oxygen therapy (HBOT) has been proven effective for these patients.

For long-term side effects

As further stated on the website most negative side effects from radiotherapy in cancer patients are short-term, appearing within six months of their last exposure to radiation. “Depending on the patient’s sensitivity to radiotherapy, the type and dose of treatment and location of the cancer, patients may experience scarring and narrowing of the blood vessels (intimal proliferation in the arterioles) within the treatment area. This can lead to inadequate blood supply and result in chronic, long-term side effects including death or damage to soft tissues or bones (necrosis, radionecrosis or osteoradionecrosis), poor wound healing and related problems such as life-threatening infections.”

These late side effects are experienced by as many as 10 to 15 percent of patients, who have received high doses of radiotherapy. Effects themselves may be delayed for several months or even years after cessation of radiation therapy.

HBOT helps

For some patients who previously had little hope of recovering from late side effects of radiotherapy, HBOT has emerged as an effective treatment. HBOT increases the amount of oxygen in the blood by way of exposing patients to pure oxygen within a sealed chamber pressurized to greater than ambient pressure. Results can be measured with a transcutaneous partial pressure oxygen (TCPO₂) monitor before and after each treatment. “Experts believe HBOT helps patients by stimulating growth of new blood vessels following radiation-induced damage,” according to the website.

HBOT has long been the most successful form of treatment or prevention of damage to the mandible resulting from radiation treatment, but it has also been effectively used to treat radiation-induced damage to the head, neck, chest wall, abdomen and pelvis. HBOT may for example “prevent tooth loss or collapse of the jaw bone in patients previously treated for head or neck cancers, promote successful skin grafts or flaps following reconstructive surgery in patients treated for breast cancer, and eliminate persistent urinary bleeding (radiation cystitis) in patients treated for prostate cancer.”

Read more [here](#) or by following the link under References.

AHA Hyperbarics does not provide medical advice, diagnose health conditions or prescribe treatment. The contents of the AHA Hyperbarics site, such as text, graphics, photographs and other materials on the AHA Hyperbarics site are only for informational purposes.

[Read more](#)

References:

[Hyperbaric oxygen therapy effectively treats long-term damage from radiation therapy.](#)

Published online on UCLA Health Jan 15, 2013.