Radiation-Induced Injuries

Even with advances in the delivery of radiation therapy, approximately 5% of patients will experience complications within 5 years of their radiation exposure. Radiation causes injury to soft tissue and bone, leading to hypoxic and/or avascular tissue necrosis. This results in degeneration of blood vessels that continues throughout the patient's life. Patients experiencing this type soft tissue or bone damage generally present with painful, progressive and often disabling tissue breakdown.

Hyperbaric Oxygen Therapy improves radiation injury outcomes

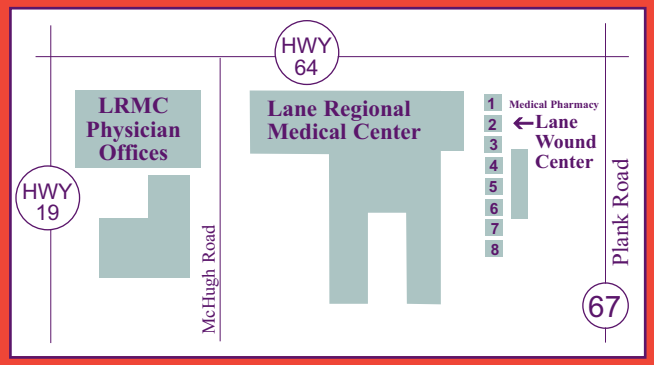
Hyperbaric oxygen therapy is one of the most studied and frequently reported therapies in the treatment of delayed radiation injuries. There are three key beneficial effects of hyperbaric oxygen in the treatment of irradiated tissue:

- Stimulates angiogenesis through establishing wound tissue oxygen gradients
- Improves tissue oxygenation
- Decreases fibrosis of tissue

The goal of HBO treatment is to provide adequate granulation to support spontaneous or surgically supported wound healing.

About our Advanced Wound Center

Our Advanced Wound Center is an outpatient program that focuses on chronic and nonhealing wounds. Using advanced treatment modalities and a case management model, we help patients improve the quality of their lives. In partnership with physicians, nurses and multiple medical disciplines, we provide invaluable care for patients.



Let our Advanced Wound Center heal your patients today

For more information about advanced wound care and Hyperbaric Oxygen Therapy, contact us today.

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LANE WOUND CENTER & HYPERBARIC OXYGEN THERAPY

An adjunctive therapy to help heal Radiation induced injuries

Indications:

A documented history of radiation therapy, with subsequent presentation of soft tissue or mandibular necrosis in the field of radiation, are clinical indicators supporting the integration of HBO as an adjunctive treatment modality. HBO is used in the treatment of soft tissue radionecrosis and osteoradionecrosis as one part of an overall plan of care. Osteoradionecrosis is the most widely applied and most extensively documented indication for hyperbaric oxygen in the treatment and prevention of chronic radiation injury.

Referral Considerations:

- Have a history of radiation exposure
- Complain of exposed bone and pain in the mouth
- Have bleeding from the rectum or the bladder
- Have radiation cystitis with resulting symptoms
- Have radiation proctitis with resulting symptoms

Treatment Scenarios:

Soft Tissue Radionecrosis

Persistent soft tissue/integumentary breakdown within a previously irradiated field that has failed conservative or surgical management, such as a flap placement into a radiated area. Other examples include:

- Radiation cystitis
- Radiation proctitis
- Vaginal radionecrosis

Osteoradionecrosis

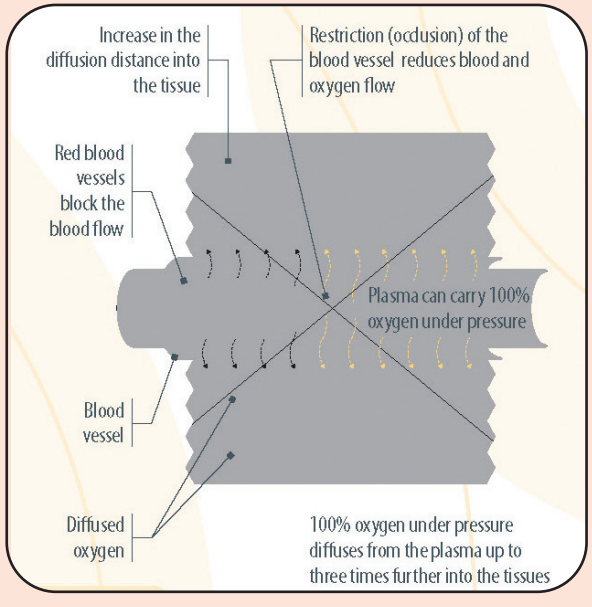
Necrosis of the mandible. (Medicare approves coverage for osteoradionecrosis of the mandible only)

Miscellaneous

Soft tissue damage to the spinal cord, brain, eye or ears. There may be an occasional radionecrosis of the skull. Rarely other parts of the body or an organ may be involved.

Hyperbaric Oxygenation

Breathing 100% oxygen under pressure causes the oxygen to diffuse into the blood plasma. This oxygen-rich plasma is able to travel past the restriction, diffusing up to 3 times further into the tissue. The pressurized environment helps to reduce swelling and discomfort, while providing the body with at least 10 times its normal supply of oxygen to help repair tissue damaged by original occlusion or subsequent hypoxic condition.



Blood Vessel Regeneration

Hyperbaric Oxygen Therapy forces more oxygen into the tissue, encouraging the formation of new blood vessels. As these new blood vessels develop, the red blood cells start to flow, delivering even more oxygen to the affected area. This creates the optimal environment for the body's natural healing processes to repair damaged tissue.