



# Impact of Hyperbaric Oxygen therapy in Osteoradionecrosis patients in King Faisal Specialist Hospital & Research Centre

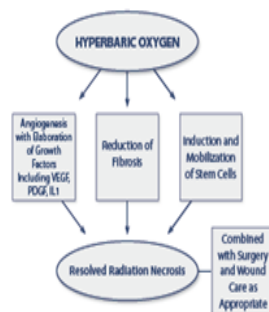
Elvira M. Sabinorio, Clinical Nurse Coordinator, HBO

**Description:** Delayed radiation injury (soft tissue radionecrosis) is one of the approved indications internationally for HBO therapy. Benefits of HBO include vascular improvement, expediting healing of ORN, improve tolerance to surgical wounds prior to oral surgery and lead to better pain management. Utilizing the adapted Marx's protocol in KFSH&RC optimized the patient's outcome before and after surgery. Patient's condition significantly improved when HBO therapy was introduced early and it led to reduction in the length of stay.

**Aim:** To apply evidence based HBO therapy to ensure high quality care is provided to the patient following radiation. To provide HBO according to the patient's condition.

**Actions taken:** Implemented the adapted Marx protocol and in collaboration with the multidisciplinary team ensured patients were referred early to HBO. This showed an enhancement in an-giogenesis, decreased fibrosis and mobilized stem cells. All of these effects can counter act the fibroatrophic, avascular and cellular mechanisms of delayed radiation injury. Supported appropriate surgical debridement / resection when necessary to resolve injury. Surgery and wound care management led to better outcomes in radiation necrosis patients due to HBO and length of stay decreased.

## Marx Protocol



**Summary of results:** The number of referrals increased to 73 in 2012 compared to 24 in 2010. This increase in referrals for HBO therapy resulted in an uptake of ORN patient's being suitable for the adapted Marx protocol. Consequently early referrals led to decreased length of stay, decreased invasive procedures and optimized patient out-

## Results:

