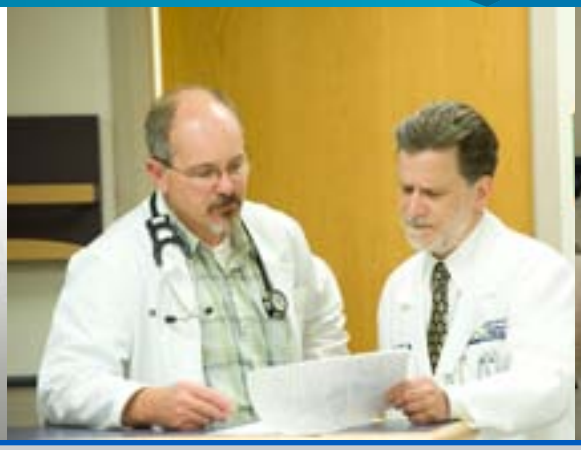
Innovations in Wound Healing Therapy

"Where Wounds Go To Heal"SM



Hyperbaric Oxygen Therapy and Chronic Refractory Osteomyelitis

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Volume - 6
Case Report - 6

Patient History

83 year old male with a history of fracturing his left leg over 70 years ago. At the time he developed osteomyelitis and required 3 separate surgeries to heal the fracture and wound. Twenty years ago he suffered trauma to the operative site and developed an ulcer requiring multiple treatments and a prolonged period of time to heal. Approximately 18 months ago he re-opened the area secondary to a minor trauma. An ulcer with exposed bone (tibia) developed which failed to heal despite multiple forms of treatment including Regranex, multiple courses of antibiotics, a vascular consult and work up. The patient was advised the wound would not heal. His past medical history was positive for coronary artery disease, hypertension and dyslipidemia. He had no history of diabetes.

The review of symptoms was negative for claudication or rest pain. Mild edema was observed which was relieved with elevation.

On physical exam the patient had good femoral and popliteal pulses. The periulcer skin was discolored. The ulcer was 1.5 x 0.5 x 0.2 cm. At the base of the ulcer, there was exposed dead bone.

Before Treatment

The periulcer skin appeared to be rotic from the chronic trauma and lacking adequate blood supply to allow healing.

Work Up

A $TcpO_2$ study was performed, revealing inadequate pO_2 to support healing.The results of the testing are as follows:

Above Ulcer: 23mmHg (room air)

Below Ulcer: 19mmHg (room air)

TcpO2 Testing

The pO_2 improved after 100% O_2 challenge.

Above Ulcer: 50mmHg (100% O_2 challenge)

Below Ulcer: 257mmHg (100% O_2)

This improvement during the O_2 saturation indicated a high probability of benefit from hyperbaric oxygen therapy.

Our work up also included an MRA with run off. This revealed some disease at the trifurcation but adequate run off to the foot.

A CT of the LLE was suggestive of osteomyelitis.

Treatment

Depending on the amount of debris, the ulcer was either debrided enzymatically with Gladase C or kept moist with SoloSite. The skin was moisturized with LacHydrin.

The patient underwent 30 HBO treatments of 100% O_2 at 2.4 ATA for 90 minutes. Follow up $TcpO_2$ studies revealed improvement in the pO_2.

Above Ulcer: 44mmHg (room air)

Below Ulcer: 27mmHg (room air)

After HBOT

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During this time the color of the skin improved.

Orthopedic and plastic surgeon consults were obtained. The patient underwent debridement of the osteomyelitic draining sinus and sequestrum.

A fasciocutaneous rotational flap and a full thickness skin graft was performed.

During Treatment

After Treatment

The patient went on to heal uneventfully.

THE PRIMARY CARE PHYSICIAN SHOULD REFER THE PATIENT FOR ADVANCED WOUND CARE IN A WOUND HEALING CENTER IF THE PATIENT:

- Has a wound that persists for more than 30 days after treatment
- Has a wound and Reynaud's phenomenon
- Has purpura
- Has a wound and hypertension
- Has gangrene or necrotic tissue in a wound
- Has a wound and diabetes

About Precision Health Care

Precision Health Care is a comprehensive wound healing and hyperbaric medicine service organization dedicated to the development of state-of-the-art hyperbaric and wound healing centers through partnership and collaboration with our affiliate hospitals.

Community-based and patient-focused, we are driven by this mission philosophy: To provide select hospitals safe, comprehensive, compassionate wound healing and hyperbaric services for patients in need.

Questions or Comments?

Contact us:
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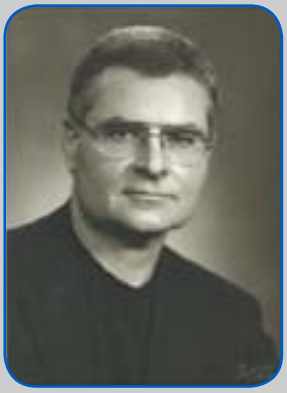
About the Author



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