

Seeing is Believing in Wound Care

CASE STUDY

Hyperbaric Oxygen Therapy (HBOT) for the treatment of frostbite.

Track and document therapeutic benefit of advanced wound care modalities.

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CASE HISTORY

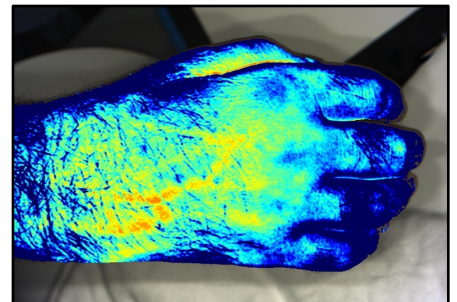
36-year-old male presented with frostbite to his right hand following cold exposure. There was pain and numbness in his fingers, and indications of early tissue ischemia.

Following the initial clinical evaluation, treatment with hyperbaric oxygen (2.0 ATA for 90 minutes) was initiated. The hyperbaric oxygen therapy (HBOT) continued for a total of 8 dives, at which point all symptoms resolved. To evaluate the effectiveness of the intervention, near infrared (NIR) spectroscopy imaging with Snapshot_{NIR}[®] was used to capture tissue oxygenation at baseline, and pre- and post-dives, in order to assess the immediate response of the injured tissue to HBO therapy.

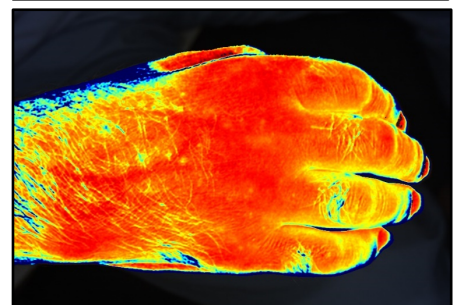
OBSERVATIONS

The oxygenation (S_tO_2) images captured and displayed with Snapshot_{NIR} immediately emphasized the on-going efficacy of HBOT, demonstrating positively the impact on tissue perfusion and oxygenation in this patient. Sequential imaging served to track and document the on-going healing progress. "The ability to assess tissue oxygenation instantaneously with the Snapshot_{NIR} device allows for better *in situ* decision making and improved patient outcomes," states Dr. Niezgoda. Additional benefits include its handheld form factor, camera-like image capture and no patient contact, which translates to minimal impact on workflow and time-savings to the clinic.

A. Day 1: Pre-HBOT



B. Day 1: Post-HBOT

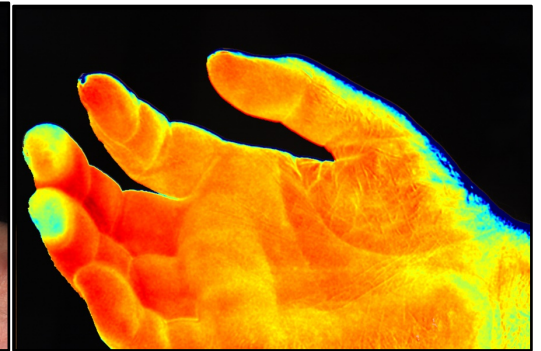


Figures A and B: Tissue oxygenation on presentation (Figure A) and immediately following HBOT on the same day (Figure B).

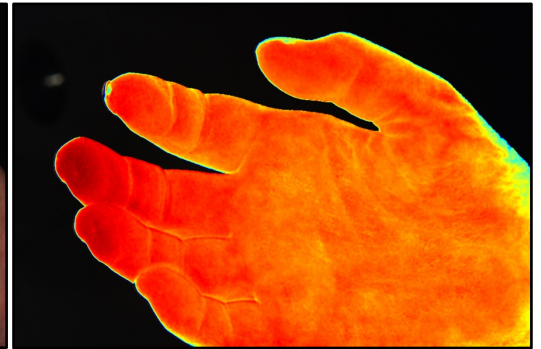
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“The ability to assess tissue oxygenation instantaneously allows for better in situ decision making and improved patient outcomes. In addition, the ability to adjust the treatment schedule on a per patient basis in order to optimize tissue salvage is currently unmatched.”

C: Pre HBOT #2



D: Post HBOT #2



Figures C and D: The patient presented to the clinic with discolored tips of D3 and D4 after shoveling his driveway. Pictures captured immediately post treatment show marked improvement in the tissue oxygenation of the treated digits.

E: 6 Month Follow-Up

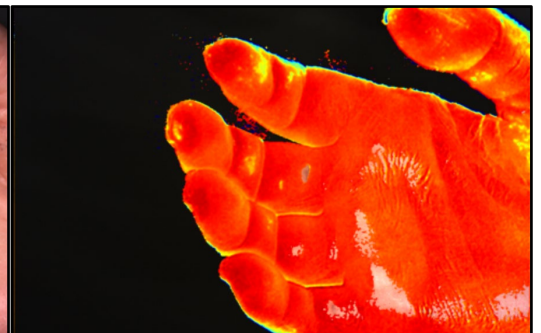


Figure E: Patient returned to the clinic 6 months following completion of therapy; captured image illustrates full healing without evidence of tissue loss.