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1: [Undersea Hyperb Med.](#) 2005 Nov-Dec; 32(6): 437-43.

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Adjuvant hyperbaric oxygen therapy (HBO2) for treatment of necrotizing fasciitis reduces mortality and amputation rate.

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OBJECTIVE: A retrospective analysis of 42 patients with necrotizing soft tissue infections treated with adjunctive HBO2 to ascertain efficacy and safety. Overall mortality was 11.9% and morbidity 5%. **SUMMARY BACKGROUND DATA:**

Necrotizing soft tissue infections have historically high rates of mortality and morbidity, including amputation. Common misconceptions that prevent widespread use of adjunctive HBO2 for this diagnosis include delays to surgery, increased morbidity, and significant complications. **METHODS:** Forty-two consecutive patients (average age 56.1) with necrotizing fasciitis presenting to a major referral center were treated with adjunctive HBO2 as part of an aggressive program of surgery, antibiotics, and critical care. Involved areas included the lower abdomen (15 patients), thigh and perineum (9 patients), flank (4 patients), lower leg (3 patients), and arm, shoulder, and axilla (2 patients). Co-morbidities included diabetes mellitus, chronic renal failure, intravenous drug abuse, peripheral vascular disease, and malignancy.

RESULTS: Mortality was 11.9% (5 patients). Both amputations (a finger and a penis), occurred prior to transport to our facility. The average number of surgical debridements was 2.8 per patient; 1.25 performed prior to the start of HBO. The infectious process was controlled after an average of 7 HBO2 treatments were administered to ensure successful wound closure. Complications consisted of only mild ear barotrauma in 3 patients (7%), and confinement anxiety in 17 (41%) but did not prevent treatment.

CONCLUSION: Compared to national reports of outcomes with "standard" regimens for necrotizing fasciitis, our experience with HBO2, adjunctive to comprehensive and aggressive management, demonstrates reduced mortality (34% v. 11.9%), and morbidity (amputations 50% v. 0%). The treatments were safe and no delays to surgery or interference with standard therapy could be attributed to HBO2.

PMID: 16509286 [PubMed - indexed for MEDLINE]

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