

Diabetes Care, Vol 10, Issue 1 81-86, Copyright © 1987 by American Diabetes Association

ARTICLES

Hyperbaric **oxygen** in diabetic gangrene treatment

G Baroni, T Porro, E Faglia, G Pizzi, A Mastropasqua, G Oriani, G Pedesini and F Favales

We treated a group of 18 hospitalized adult diabetic patients (all with retinopathy, 17 with symptomatic neuropathy, and 6 with macroangiopathy) presenting with gangrenous lesions of the foot by a combined regime consisting of strict metabolic control, daily debridement of necrotic tissues, and daily hyperbaric **oxygen** (HBO) treatments given in a multiplace **oxygen** chamber. Another group of 10 adult subjects with comparable foot lesions (all with retinopathy, 9 with symptomatic neuropathy, and 4 with macroangiopathy) was treated in exactly the same way except for HBO. In the test treatment group, 16 patients were healed, and the remaining 2 showed no improvement and later underwent amputation. The number of HBO treatments required for healing was significantly related to the size of gangrenous lesions. In the non-HBO-treated group, only 1 patient improved, 5 of 10 showed no change, and 4 of 10 worsened until leg amputation was unavoidable. Comparison of the two groups by chi 2-test revealed a highly significant difference ($P = .001$). In practical terms, HBO treatment drastically reduced leg amputations in patients so treated in the last 3 yr compared with earlier and current figures for patients not receiving HBO treatment.

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L. Kessler, P. Bilbault, F. Ortega, C. Grasso, R. Passemard, D. Stephan, M. Pinget, and F. Schneider

Hyperbaric **Oxygenation** Accelerates the Healing Rate of Nonischemic Chronic Diabetic Foot Ulcers: A prospective randomized study

Diabetes Care, August 1, 2003; 26(8): 2378 - 2382.

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C. Wang, S. Schwaitzberg, E. Berliner, D. A. Zarin, and J. Lau
Hyperbaric Oxygen for Treating Wounds: A Systematic Review of the Literature

Arch Surg, March 1, 2003; 138(3): 272 - 279.

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S. R. Bonomo, J. D. Davidson, J. W. Tyrone, X. Lin, and T. A. Mustoe
Enhancement of Wound Healing by Hyperbaric Oxygen and Transforming Growth Factor {beta}3 in a New Chronic Wound Model in Aged Rabbits

Arch Surg, October 1, 2000; 135(10): 1148 - 1153.

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P. D. Goldenheim, D. Gohdes, S. Rith-Najarian, M. Capelli-Schellpfeffer, L. H. Philipson, G. M. Caputo, J. S. Ulbrecht, and G. W. Gibbons
Foot Disease in Diabetes

N. Engl. J. Med., January 26, 1995; 332(4): 269 - 270.

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