



Diabetic hand infections and hyperbaric oxygen therapy

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Objective: The aim of this study was to discuss the clinical characteristics and results of hand infections in diabetic patients treated with hyperbaric oxygen therapy (HBOT).

Methods: This retrospective study included 10 patients with diabetes mellitus who underwent HBOT due to hand infections between January 2006 and February 2011.

Results: Amputation was performed at the level of the right hand index finger proximal interphalangeal joint in 1 patient and at the level of the distal phalanx of the left hand middle finger in 1 due to necrotizing soft tissue infection. Ulcers of 8 patients healed completely without amputation.

Conclusion: The addition of HBOT to the standard treatment may contribute to the healing of hand ulcers in diabetics by increasing the tissue oxygenation and correcting the process of disturbed wound healing.

Key words: Amputation; diabetic hand infection; hyperbaric oxygen treatment.

According to the World Health Organization (WHO), 346 million people have diabetes worldwide and the number of diabetics is predicted to double between 2005 and 2030.^[1] Foot ulcers are one of the most important complications of diabetes and cause high rates of amputation.^[2,3] Hand infections in diabetic patients are observed less frequently than foot infections.

Hand infections related to diabetes have mostly been reported in studies of African origin.^[4-8] These ulcers are usually associated with traumas and progress quickly; gangrene of the extremity causes increased rates of morbidity and mortality.^[4-9] Hand infections are also seen in the diabetic population outside the tropical regions.^[10,11]

Hand problems such as limited joint mobility, Dupuytren's contraction and trigger fingers have been reported in diabetic patients. Such problems related with the musculoskeletal system in the hands of diabetic patients could be defined as a syndrome.^[12,13]

Risk factors for diabetic hand infection are insect bites and trauma. Tropical diabetic hand syndrome is generally defined by Type 2 diabetes mellitus (DM), female sex, low socioeconomic level, poor glycemic control, presence of neuropathy, previous history of trauma, late admission, severe and deep palmar sepsis, and a high risk of amputation and mortality.^[5,7,8,10]

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