Limb Function

Salvage of Limb and Function in Necrotizing Fasciitis of the Hand: Role of Hyperbaric Oxygen Treatment and Free Muscle Flap Coverage

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Abstract and Introduction

Abstract

We report a case of necrotizing fasciitis of the hand treated by urgent debridement followed by serial debridements, hyperbaric oxygen, and delayed free muscle flap coverage. After control of the infection, a major soft-tissue defect remained on the dorsum of the wrist and hand, exposing all extensor tendons. A rectus muscle free flap was used for wound coverage and salvage of the exposed tendons; the muscle flap was covered with a delayed skin graft. The patient regained satisfactory function with ability to extend all digits. This case emphasizes the importance of aggressive debridement and hyperbaric oxygen treatment and shows the valuable role of free muscle flap wound coverage for preservation of function in cases of necrotizing fasciitis of the hand.

Introduction

Necrotizing fasciitis of the upper extremity can be limb-threatening as well as life-threatening. Urgent and aggressive debridement is indicated to control the infection, which can expose tendons, bones, and joints. We report a case of necrotizing fasciitis of the hand treated by urgent debridement followed by serial debridements, hyperbaric oxygen (HBO), and delayed free muscle flap coverage. The patient regained satisfactory function with ability to extend all digits. This case emphasizes the importance of aggressive debridement and HBO treatment and shows the valuable role of free muscle flap for wound coverage in cases of infection. Modern therapeutic abilities extend the goals of treatment for necrotizing fasciitis to include maximal preservation of function.

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