

Class IV Laser Treatment of a Spider Bite

Case Study: Spider Bite

History:

A 41 y/o female patient presented with a painful sub-acute necrotizing wound on the left cheek as the result of two bites from a wolf spider.

Treatment Protocol:

Class IV laser, dual IR wavelengths 790 nm and 970 nm with modulation.

The patient was treated a total of four visits using a scanning technique with laser probe 1.2 to 2cm distance away from the skin. Treatment to wound and surrounding tissues extending a half inch around the periphery of the lesion.

Power level: 2-3 watts using variable modulation at 2hz, 10hz, 2500hz, 4200hz, and 5000hz for 330 seconds per visit.

Treatment dosage estimated at: 455-500 Joules per treatment.

Treatment Results:

Pain resolved after the first treatment. Redness, inflammation and itching was greatly reduced. Wound closure and epithelialization began as soon as 24hr. after the first treatment.

By the third treatment, the patient described occasional itching without additional symptoms. The wound had fully epithelialized by the fourth visit.

Case study courtesy:

Dr. J. Rod McGinnis, Private practice: Sacramento, CA

Initial Presentation



Third Treatment
five days after
initial visit



Fourth Treatment
twelve days after
Initial visit



Discussion:

Spider bites can often be painful, itchy, red and swollen. Pathological syndromes may result from reactions to spider venom. In general, a necrotic subcutaneous lesion may develop that expands and lingers for months to years or systemic effects may predominate if the venom has a neurotoxic effect. A bite from a wolf spider (*Lycosa raptor*) may result in dermonecrosis and rarely a severe allergic reaction. When dermonecrosis occurs it often results in a long standing necrotic lesion with a significant potential for secondary infection and cellulitis. The current medical treatment is largely palliative including analgesia, antihistamines and topical wound care. Antivenom is effective if the spider can be identified. Severe reactions require hospitalization, hyperbaric oxygen and surgical debridement of the necrotic lesion.

Conclusion:

This case study demonstrates the successful treatment of a necrotic lesion resulting from a spider bite, using a class IV IR laser.

