

Class IV Companion Therapy Laser Copperhead Snake Bite Treatment

Case Study Provided By: John C. Godbold, Jr., DVM
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Problem

Pain, swelling and edema, and tissue necrosis following a copperhead snakebite. Thirty-six hours after the bite the patient was markedly painful and barely weight bearing. Swelling and edema persisted.

Patient

"Baxter", Mix, 4 yr, Mn, 19.4 lbs

Procedure

Treatment using a Class IV therapy laser was instituted as an adjunct to appropriate medical and wound care.

Companion Laser Settings

The area of tissue necrosis was treated for pain and the more proximal and distal areas were treated for swelling and edema.

The Acute Pain Protocol was applied to the area of tissue necrosis.

2 watts / 2 min / CW
2 watts / 1 min / 2 Hz
2 watts / 1 min / 20 Hz

The Edema / Swelling Protocol was applied proximal and distal to area of tissue necrosis.

4 watts / 1 min / 100 Hz
4 watts / 2 min / 2500 Hz
4 watts / 2 min / 5000 Hz

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Fig. 1: Acute swelling of right foreleg and axilla 36 hours after a copperhead snake bite to the right carpus



Fig. 2: Focal tissue necrosis at site of a copperhead snakebite.

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Treatment Technique

For best effect the treatment should be directed into the target tissue from several different angles. All affected areas should be treated with all of the Hz in each protocol.

Rationale

Treatment of this patient utilized laser energy delivered at C/W and pulsed at low (2, 20) Hz for the reduction of pain.

Treatment of the areas proximal and distal to the bite site utilized higher Hz (100, 2500, 5000) which are more effective in opening lymphatics and reducing tissue edema and swelling.

Results

This patient was only moderately affected by the copperhead bite but still experienced severe pain and tissue reactions.

Adjunct use of the Class IV therapy laser resulted in a marked reduction in pain and swelling within hours of the initial treatment.

Twenty four hours after the initial treatment a second treatment was administered and the patient was discharged on oral medications. The owners reported uneventful recovery and complete healing.



Figs. 3 & 4: Treatment of focal tissue necrosis from both posterior and lateral directions. Treatment is directed into target tissue from multiple directions for best effect.



Fig. 5: Twenty four hours after initial Class IV therapy laser treatment the patient displayed full weight bearing and marked reduction in swelling and edema.

