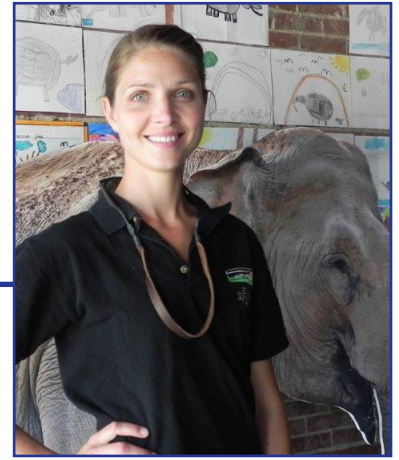


MLS[®] Laser Therapy: A Case Study

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Treatment of Cutaneous Pressure Wounds in an Asian Elephant



Differential Diagnoses:

Pressure sore, abrasion

Lab and Other Diagnostic Test Results:

Biopsy/Culture: Further diagnostics were not performed on this lesion.

Radiographs: N/A

Treatment Plan:

Anti-inflammatory and topical antimicrobial therapy was initiated. The wound was thoroughly cleaned twice daily, and topical treatments were then applied. MLS Laser Therapy treatments were also added.

Patient:

Shirley, Female, Asian Elephant, 67 y

History:

Shirley occasionally develops pressure sores over parts of the body where the muscular cover over a bony area is minimal, such as the facial crest, point of the shoulder, and point of the hip. This case study represents a pattern we have seen with laser therapy, whereby granulation and wound healing time is decreased significantly when compared to nearly identical wounds that were not treated with laser therapy.

Exam:

Shirley is closely monitored, and is examined by a veterinarian a minimum of twice per week. Her exam findings the day laser therapy treatment was first administered are summarized as follows: a 5.7cm by 4.2cm, superficial cutaneous lesion, was discovered at the point of the left hip. It was superficial, extruding serous drainage, and was sensitive to the touch.

MLS Laser Therapy Protocols:

Setting: Wound Healing Contamination

Probe Used: ULTRA Handpiece

Mode: CPW

Treatment Delivery: Point to Point

Points: 1

Dose: 1.05 J/cm²

Total Joules: 21.096

Total Time per Treatment: 6 Seconds

Intensity: 100%

Treatment Area: Left hind point of hip

Treatment Interval: 6 treatments, 2 times per week

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Other notes:

The author considers it noteworthy to mention that, during the initial treatment, Shirley was highly apprehensive of the laser, and especially that her trainer and the technician were wearing strange eyewear. By the second treatment, however, she was entirely relaxed, leaning in to areas being treated and visibly relaxing. The Elephant Sanctuary operates strictly under Protected Contact, an elephant management system that allows animals the choice to participate in any training or treatment event. Had she wished, Shirley could simply have walked away from the therapy laser at any time. In the past year of laser treatments, she has elected to stay and willingly participate in her laser therapy sessions 100% of the time. Our conclusion has been that she is able to immediately recognize an increase in comfort as a result of this therapy.

Results:



Day 1 of laser treatment 1/18/15



After second laser treatment 1/20/15



After 4th laser treatment (1/24/15)

After 6 total laser treatments, the lesion had completely been covered in healthy granulation tissue, and other routine medications were discontinued. Historically, Shirley had developed a pressure sore in this same location and at a similar time of year. It was previously treated for a total of four months before it was healed and treatments were discontinued. The wound was otherwise treated in a similar manner, with a total healing time of only 2 months when MLS Laser Therapy was administered. This wound followed a pattern that we are seeing frequently when laser therapy at the "wound healing contamination" setting is used, twice weekly, in addition to other treatments - reducing total wound healing time by half in many cases. We are thrilled with the consistent response we see in cutaneous wound healing in our elephants with the initiation of this therapy.