

# **CLASS IV LASER THERAPY: EFFECTIVE FOR BACK AND NECK/SHOULDER PAIN**

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## **CLASS IV LASER THERAPY CASE REPORT**

### **BACKGROUND:**

Class IV laser therapy is a recent modality that is used to treat pain and promote healing of muscular tissue. The procedure is minimally invasive and easily performed. Laser therapy was added to conventional chiropractic treatment of spinal manipulation and an exercise program for treating patients with back pain. The objective of this investigation was to assess efficacy and safety of the combination and generate preliminary results for a randomized controlled trial.

### **METHODS:**

Between 9/2009 and 2/2010, a total of 55 patients with non surgical lower back pain (sciatica) presented to my office and gave consent for treatment. Twenty-four patients with back pain received spinal Class IV laser therapy in addition to manipulation for back pain. Twenty-one patients (historical controls) received spinal manipulation without Class IV laser therapy. All patients completed VAS scales before treatment (VAS0), at one week (VAS1), and at four weeks (VAS4). Regardless of treatment group, all patients received a personalized regimen of spinal manipulation, manual therapy, and exercise, under the direction of the principal investigator (LDM). Percent difference between VAS0 and VAS4 was compared between groups.

### **RESULTS:**

Demographics were similar for both groups (Table 1). Patients in the manipulation + laser group reported pain relief after 2-3 sessions of laser therapy (clinical observation). No adverse events were noted following laser therapy

*Table 1 – Patient demographics and dependent variables*

	N	Age	VAS 0	VAS 4 %	Difference
Laser + Manipulation	24	54.2 ± 11.1	6.5 ± 1.9	1.75 ± 1.6	71.7 ± 22.0
Manipulation Only	21	51.0 ± 12.7	5.5 ± 1.4	3.5 ± 2.1	50.5 ± 28.4

A positive-valued percent differences of VAS between pretreatment and 4wk points; indicate that

a quantitative reduction in pain by both treatment groups. Statistical comparison of the groups using an unpaired t-test indicated that the manipulation + laser offers greater pain reduction when compared to manipulation only ( $p=0.007$ ). Interval estimates indicate a 21.18 larger reduction in VAS (95% Confidence Interval: 6.00, 36.35) in the manipulation + laser group.

### **CONCLUSIONS:**

These results indicate that both treatments successfully reduced the VAS by the fourth week of treatment, and that a higher reduction in VAS occurred in the group treated by manipulation + laser at week four.

In summary, Class IV laser therapy is a safe and effective modality for treating low back pain when added to conventional treatment of manipulation and exercise. Further study is indicated to support these initial findings.

### **ABOUT THE AUTHOR**

Dr. Morries was educated at Harvard Medical School –Postgraduate studies in Neurodiagnosis and the American Academy of Neurology on two different occasions for classes in Neurodiagnosis.

His continuing education has included Board Certification in: Neurology, Sports Injuries, Rehabilitation, and Disability Analyst. He attended Classes in Rehabilitation at the #1 Chicago Institute of Rehabilitation.

He is chairman of the Colorado Chiropractic Journal Club; with which he has co-authored papers on; Hip Dysplasia, Carpal Tunnel Syndrome, Thoracic Outlet Syndrome, Plantar Fasciitis, and a case study on Lumbar Osteomyelitis. He was co-author in a Chronic Neck Pain study with Colorado University Health Science Center study and currently involved a co-author, in a second study with CU on Lumbar Spine Pain and Laser Therapy.

*Source of Study: AspenLasers.com*

