COMPLICATIONS ASSOCIATED WITH THE USE OF LOW INTENSITY LASER IN PATIENTS WITH DISCOPATHY

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HISTORY: Two patients with known lumbar degenerative disc disease, low back pain (LBP). Case one had right lower extremity pain; there were no lower extremity complaints in case two. Both patients reported with LBP. Case one had significant right lower extremity complaints following a radicular pattern. Case two had little to no radicular complaints Both cases demonstrated significant restrictions of their activities of daily living secondary to their complaints. Neither case had a history of prior lumbar surgery. Both cases demonstrated a significant increase of their symptoms with the application of a low-level class three laser to the lumbosacral region

PHYSICAL EXAMINATION: Both case presentations revealed the patients to have lumbar muscle spasm, significant LBP rated from 8/10 for case one and 9/10 for case two using the visual analog pain scale. Case one demonstrated pain on the straight leg raiser (SLR) radiating into the right along the right S1 nerve root. Case one had positive Valsalva testing which was negative in case two. Case one had an absent right ankle jerk with preserved patellar reflexes. Lower extremity reflexes were graded 2/2 (using a 4 scale as normal) for the knee and ankle reflexes. Both patients had restricted lumbar spine range of motion testing. Neither case demonstrated diminished strength in lower extremities. Case one had diminished sensation along the right S1 dermatome.

DIFFERENTIAL DIAGNOSIS: lumbar discopathy, spinal stenosis, mechanical low back pain.

TEST AND RESULTS: Magnetic resonance (MR) imaging of case one demonstrated a disc protrusion at the L5/S1 level with contact to the S1 nerve root and concomitant mild spinal stenosis. Case two demonstrated showed L5/S1 central and slightly leftward paracentral disc protrusion minimally abutting the descending S1 nerve root sleeves, mild facet degenerative changes at L4-L5, and a central annular rent. Radiographs demonstrated mild degenerative facet arthrosis at L4/L5 L5/S1 accompanied by L5/S1 discogenic spondylosis and left side lumbar inclination companied by a shallow simple right thoracic curvature.

FINAL DIAGNOSIS: Case One: Lumbar discopathy with secondary S1 neuropathy and complicating spinal stenosis. Case two was assessed to have low back pain secondary to a lumbar discopathy and facet arthrosis.

TREATMENT: Both patients were placed in the prone position and treated by the application of class three low level laser. Case one was treated using MedX low-level laser therapy (LLLT) at the right aspect of L5 with an anticipated dose of eight joules at 758 and 870nm. Within five seconds of the initiation of the laser treatment the patient complained of instantaneous increased LBP and increased right leg symptoms. Treatment was stopped immediately. When the treatment was stopped the pain also instantaneously stopped. In case two the low-level laser therapy equipment used was a Genesis Vectra by Chattanooga. LLLT was applied over the facet area at L4/S1, bilaterally at 1:03 minutes 45.2 Joules with a 13 diode, 5x200 mW continuous acute setting. Immediately after LLLT treatment the patient was unable to get off the table. There was severe pain (10/10) in low back and bilateral S1 radicular symptoms, a (+) Valsalva's in prone position. Ice and interferential for 15 minutes was applied with no improvement. The patient was injected at L4/S1 facet area bilaterally with marcaine and depomedrol. The patient was then able to get off table and walk out with assistance. The patient did follow-up and has treated as usual without LLLT. This patient recovered and was symptom free at the time of dismissal.