

PERCUTANEOUS LASER DISCECTOMY IN THORACIC DISC HERNIATION.

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ABSTRACT

In order to minimize the invasive approach to the thoracic spine, permitting the best preservation of the anatomy, percutaneous Laser Discectomy has been performed in thoracic disc herniation. The possibility to treat percutaneously thoracic spine under CT-Scan, appears to give the best resolution of the pathology, avoiding general anesthesia and potential lung complications. A 980 nm Diode (**Biolitec AG**) Laser energy introduced via a 21G needle under CT-Scan guidance and local anesthesia, vaporizes a small amount of nucleus pulposus with a disc shrinkage and a relief of pressure on nerve root.

Material and Method: We treated 8 patients affected by thoracic disc herniation, unresponsive to conservative treatment for at least 3-6 months. The level involved in 3 cases was T10-T11, in 2 cases T11-T12 and in 3 cases T12-L1.

The procedure has been performed under multi slices CT-Scan guidance (64 Slices). Laser Decompression has been performed via a 21 G needle inserted into the disc herniated. The total Laser energy delivered was of an average of 1000 Joules, in pulsed - 3 sec – wave, 8 Watt powered. A specific Diode Laser 980nm (**Biolitec AG**), and a dedicated 360 µm optical fiber (NA 0.22) has been used.

Results: according to Macnab's criteria, we had a successful result in the 96% of cases. No postoperative treatment was delivered into the discs Laser Decompressed and no disc has been treated in a second step surgical way. Under CT-Scan guidance no complication occurred.

In conclusion percutaneous Laser Discectomy under multi slices CT-Scan, is a valid surgical choice in the management of thoracic disc herniations, permitting to avoid general anesthesia and potential complications in thoracic spine surgery.