PERCUTANEOUS LASER DISC DECOMPRESSION

WITH

LASEMAR 1000

Before and After

Magnetic Resonance of a patiente with extruded Hernia L4 - L5

Courtesy of G.P. Tassi M.D.

BEFORE

AFTER 6 MONTH

FDA APPROVED PROCEDURE FOR TREATMENT OF HERNIAS
PLDD (Percutaneous Laser Disc Decompression) is an effective minimally invasive surgical technique in the treatment of cervical, dorsal (anea T1-T5 segment) and lumbar disc hernias.

THE PROCEDURE

It is carried out under local anesthesia. Nucleus pulposus of the intervertebral space in question is hit by a laser beam carried by an optical fiber inserted in a thin needle correctly positioned in the wanted site under scopic control. From the clinical point of view, the partial vaporization of nucleus pulposus induces the decompression of the nerve in question. The objective of the procedure is the reduction of hypertension exerted by system "disc hernia" on the nerve root. This limits also the onset of possible relapses resulting from ablation alone.

POST-OP

After the treatment, which lasts from 30 to 60 minutes, a 24-h rest is recommended. The next day the patient may start a gradual resumption of daily activity. The working activity is resumed gradually in 15 - 30 days (depending on the type of activity performed).

ADVANTAGES

By such technique, no skin cut is necessary; no muscular, articular, ligamentous or bone lesions occur, which are the unavoidable consequences in the micro-surgical approach (both orthopedic and neurosurgical approaches), which could be followed by peri-articular adhesions, vertebral instability, post-operative muscular pains, etc. In the few patients in whom the treatment with laser PLDD did not take to the expected results, the surgical procedure is not precluded at all.

COMPLICATIONS

The reported complications of PLDD are minimal and mainly concern thermal discitis (disc inflammations), septic complications are possible also with traditional surgery.

INDICATIONS

- discal non-sequestrated hernias
- cervical hernias

BIBLIOGRAPHY

From the beginning of the clinical trial so far, thousands of patients have been treated. Numerous papers published on international scientific journals documented excellent results, mini-invasivity, reliability, safety, and stability of procedure.

- Comparison of results between 500 microlasers and 500 percutaneous laser disc decompressions (PLDD) procedures at the lumbar spine G.P. Tassi M.D.

- Preliminary Italian experience of lumbar spine percutaneous laser disc decompression according to Choy's method: G.P. Tassi M.D

- Percutaneous laser disc decompression - our experience with the usage of the diode laser: Krasimir Rotim M.D., Robert Safic M.D., Goran Lakičević M.D.

REFERENCE CENTERS IN ITALY:

Dr. Azuelos Alberto (Neurosurgeon)
Dr. Colonna Ugo (Pain Therapist)
Dr. Cerri Francesco (Anesthesiologist)
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MATERIAL

LASEMAR 1000 - 15 W

Wavelength: 980 nm
Laser - Power: High Power Solid State Diode 15 W
Preset Program: Specific PLDD Preset
Pulse Duration (Time ON and Time OFF): Selectable 5-1000 msec - step 5 ms
Operative Mode: Single and Multiple Pulse, Continuous Mode
Cooling System: Peltier Cells
Pilot Light: 635 nm
Electrical Power: 220/110 VA 300 VA peak
complying with:
ISO 9001 ISO 13485
CEI EN 60601-1
CEI EN 60601-2-22
CEI EN 60601-1-4
CEI EN 80825-1
CEI EN 60601-1-2

PLDD - KITS

Lumbar Kit
Conical needle 15 cm
pldd optical fiber 320 mm
fiber block handpiece

Cervical Kit
Conical needle 10 cm
pldd optical fiber 320 mm
fiber block handpiece