

CERVICAL PERCUTANEOUS LASER DISC DECOMPRESSION

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STUDY DESIGN

A prospective study concerning 57 cases with cervical disc herniations was evaluated 3 and 12 months after PLDD.

OBJECTIVES

To describe the technique and to evaluate the efficacy and safety of the Holmium YAG laser (LIS), in a population suffering from a radiculopathy secondary to a soft cervical herniation. This study excluded sequestered fragments and important degenerative changes.

SUMMARY OF BACKGROUND DATA

PLDD was first initiated by CHOY and ASCHER in 1986 using a Nd:YAG laser at lumbar level. In Europe, the first cervical level case was performed by J.HELLINGER in 1991. In 1993, W.SIEBERT published a very large study in SPINE establishing the codification of the technique at the different levels of the spine. He concluded that HO:YAG laser is safer and more efficient, giving its best results at the cervical level.

RESULTS

At 3 months, post-operatively we noted that:

- The neurological signs had totally disappeared.
- The average of the radicular pain was reduced by **82%** on the AVS and the cervical pain by **69%**. Also, the incapacity questionnaire, evaluated on 30 cases, showed a decrease of the average by **76%**.
- **87%** of the patients considered the result as a *success*.

At 12 months, the rate of success, evaluated on 27 cases, was maintained at **89%**.

The statistical analysis using the *Student test* showed that the patients operated with this technique had significantly improved at 3 and 12 months post-operatively.

COMPARISON WITH OUR FIRST SERIES OF 29 CASES

This new study, including 29 cases already evaluated in 2004 showed a clear improvement of the results, from **72%** to **87%**.

The comparison between the 2 series showed that the last 28 cases were a full success without any complications.

The main reason is due to a better patient selection. The selection criteria must associate radio-clinical correlation with evidence of a soft herniation and without important degenerative changes.

CONCLUSION

The results of this second controlled study remain encouraging.

The statistical analysis showed a significant improvement at 3 and 12 months post-operatively.

This technique seems to be an interesting alternative to open surgery, being less invasive.

A better selection of patients has shown a clear increase of the success rate. However, the operator must be well trained on PLDD techniques.

The last generation of HO:YAG laser has made significant progress with regards to security.

The pain provocation during discography seems to have a prognostic value related to the good results.