

The outcome of pulsed radiofrequency treatment of the dorsal roots vs lumbar nerve root injection in patient affected by lumbar radiculopathy.

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Introduction

Degenerative disc disease (DDD) of the lumbar spine is a common pathology affecting a high percentage of people.

Extraforaminal nerve root compression at the lateral recess is associated with chronic neuropathic pain, presumably caused by direct compression of the dorsal root ganglion by the prolapse disc.

There is little evidence regarding the effectiveness of medical management of lumbosacral radicular pain.

Pulsed radiofrequency (PRF) treatment of the dorsal root ganglion (DRG) has been used as a minimally invasive treatment of lumbar radicular pain (1, 2) as an alternative treatment to lumbar nerve root injection (LNRI) with steroids (4).

Results

Both groups showed a statistically significant improvement at 12 weeks when compared it to baseline.

There was not statistical difference in VAS and McGill scores between the two groups, although there was a trend of better outcome in the PRF group compared to the LNRI group.

The mean VAS baseline was 5.99 ± 0.95 in the PRF group and 6.18 ± 0.84 in the LNRI group.

The mean McGill baseline score was 28.07 ± 8.65 in the PRF group and 29.08 ± 5.42 in the LNRI group.

At 12 weeks the mean VAS was 4.73 ± 1.61 (p value: < 0.001) in the PRF group and 4.95 ± 1.33 (p value: $p < 0.01$) in the LNRI group.

The mean McGill score at 12 weeks was 20.53 ± 8.77 (p value: < 0.01) in the PRF group and 24.62 ± 7.56 (p value: < 0.05) in the LNRI group.

The data was expressed in mean \pm SD; t-Student test was employed to calculate statistical significance.

Conclusion

Our pilot study showed that both treatments were effective in providing pain relief and better quality of life at 12 weeks.

There was no statistical difference between the two groups. However, the PRF group achieved better results.

A large study is needed to assess the difference, if any, between the two treatments.

Method

We treated a total of 28 patients affected by unilateral lumbar radiculopathy due to degenerative disc disease, as shown at the MRI scan.

Patients received pulsed radiofrequency treatment (PRF) of the dorsal ganglia (15 patients) or lumbar nerve root injection (LNRI) with methylprednisolone (13 patients).

They were 10 female and 5 males in the PRF group, and 7 female and 6 males in the LNRI group.

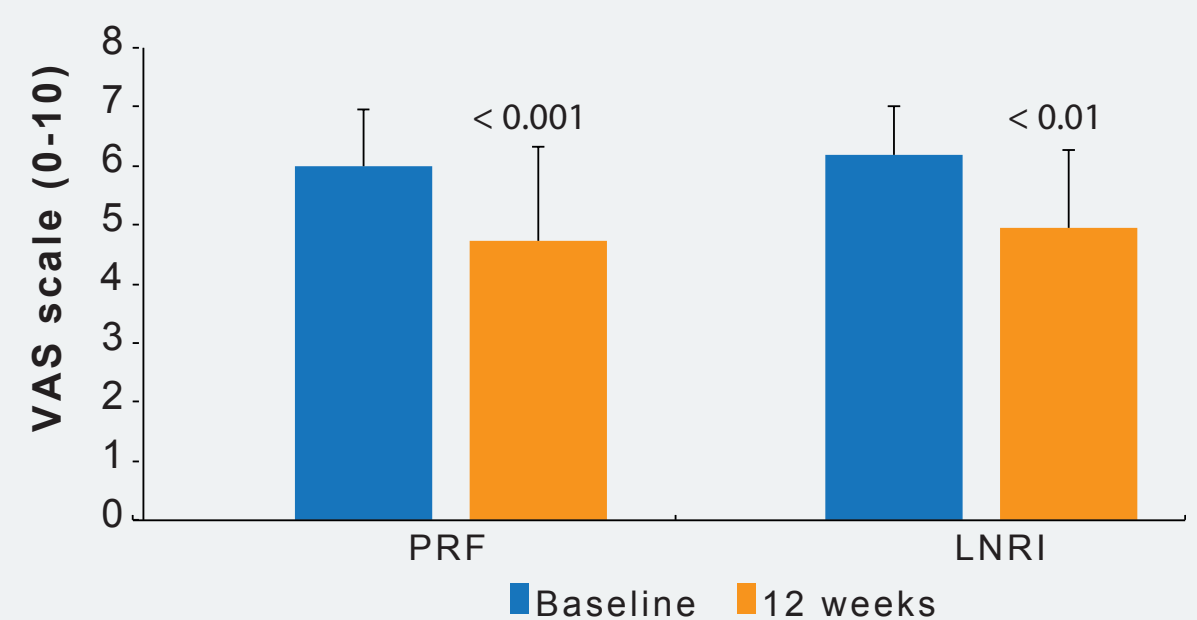
The average age was similar in both groups (59 years in the PRF group and 60 years in the LNRI).

The PRF treatment was performed for 300 seconds at 42 °C temperature degree and the LNRI with a total of 10 mls of 120 mg methylprednisolone (3 mls) and chirocaine 2.5g/ml (7mls).

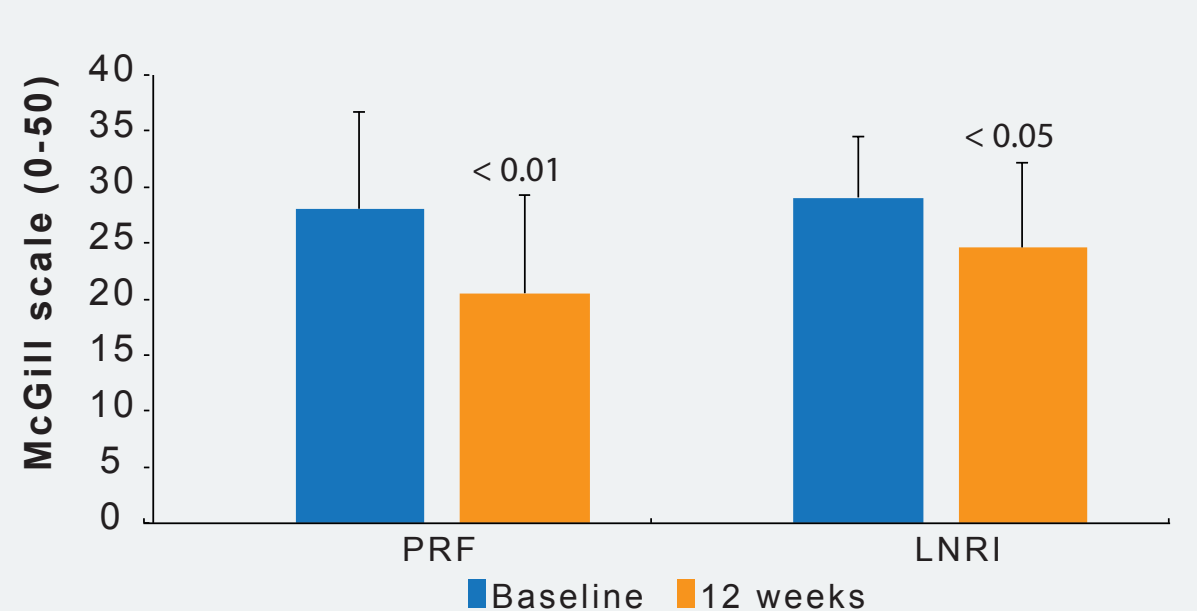
Both procedures were undertaken under fluoroscopic guidance in a full sterile condition.

Patients completed a VAS and McGill questionnaire at baseline and at 12 weeks follow up.

VAS scale at baseline and at 12 weeks



McGill scale at baseline and at 12 weeks



Reference

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