CT guided Pulsed radiofrequency treatment of the lumbar dorsal root ganglion in patients with Acute Radicular Low Back Pain

Wednesday 10:30-10:40 AM | SSK13-01 | Room: E353C

PURPOSE

To determine the clinical impact of CT-guided Pulsed Radiofrequency in the management of patients with acute or sub-acute neuro-radicular pain from lumbar disc herniation, refractory to usual therapeutic strategies.

METHOD AND MATERIALS

Patients were eligible for this single-center prospective study if they presented acute or sub-acute neuro-radicular low back pain (EMG confirmed), refractory to usual treatments (drugs and injections), and if they could safely undergo Pulsed Radiofrequency procedure. Treatment was performed using a 22-20 G needle-electrode with probe tip directed to the symptomatic DRG under CT guidance; E-pulsed radiofrequency (Cosman G4) was administered for 10 min at 45V with constant local temperature of 42°C. Clinical evaluation was conducted with Visual Analogue Scale (VAS), Owestry Disability Index (ODI) and Roland-Morris (RM) score for quality of life assessment; all questionnaires were obtained at baseline and at 1-week, 1-month and 3-month follow-up. Analyses were performed on a per-protocol basis.

RESULTS

Over a 3-year period, 80 patients were treated with Pulsed RadiofrequencyMedian VAS scores decreased from 7.8 at baseline to 3.5 at 1week after treatment, to 2.6 at 1 month and 1.3 at 3 months; median ODI scores decreased from 78.0 at baseline to 12.5 at 1 week, to 6.0 at 1 month and 5.5 at 3 months; RM score decreased from 16 at baseline to 3 at 1 month and 1.5 at 3 months ($p<0.001$). Overall, 90.0% of patients reached a 0 VAS score within the first month after treatment; 97.5% of patients had a decrease of at least 20 points in ODI score in the same interval. There were 6 patients considered partial responders that required a second PRF session.

CONCLUSION

CT-guided Pulsed Radiofrequency has shown to be a minimally invasive, effective and repeatable percutaneous treatment option for patients with acute or sub-acute neuro-radicular low back pain.

CLINICAL RELEVANCE/APPLICATION

the results of this study are superior to those reported from literature for usual care strategies and injections and may avoid surgery for a substantial number of patients with sciatic disc compression.