NOVEL SCS SYSTEM FOR THE TREATMENT OF CHRONIC BACK AND LEG PAIN: THE NEW PRECISION™ SPINAL CORD STIMULATION

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KEY WORDS: Burst stimulation, High Frequency (HF), Failed Back Surgery Syndrome

BACKGROUND:

In recent years, software development has been key to the next generation of neuromodulation devices. In particular HF and burst stimulation are new ways to deliver energy to the spinal cord that may offer advantages over tonic stimulation. The new Precision™ Spinal Cord Stimulation system allows delivering both electrical waveforms. The objective of this study was to compare safety and efficacy of the two SCS therapies in patients with FBSS.

MATERIALS AND METHODS:

Six (6) patients enrolled. During the four weeks trial period patients experienced both stimulations for two weeks each. Subjects were assigned in a 1:1 ratio to starting treatment (burst or high frequency). After two weeks patients have changed stimulation. We collected data about pain relief and disability

RESULTS:

All subjects passed a temporary trial. Pain and quality-of-life measures showed improvement during the trial period and all patients were implanted with an SCS system afterwards. 4 patients chose high frequency at the time of permanent implant because they experienced a better pain relief. In all sample pain improved significantly (p=.01)
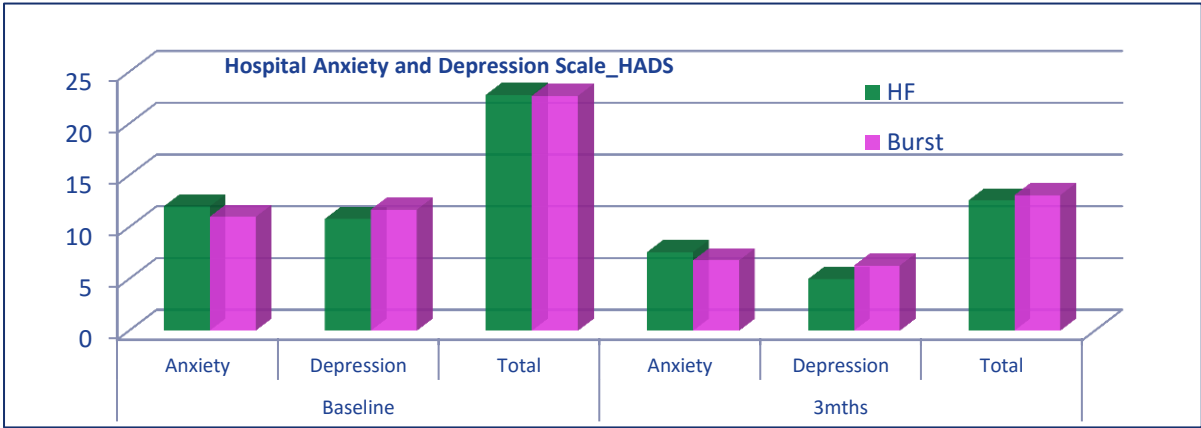

0-10 VAS-PAIN
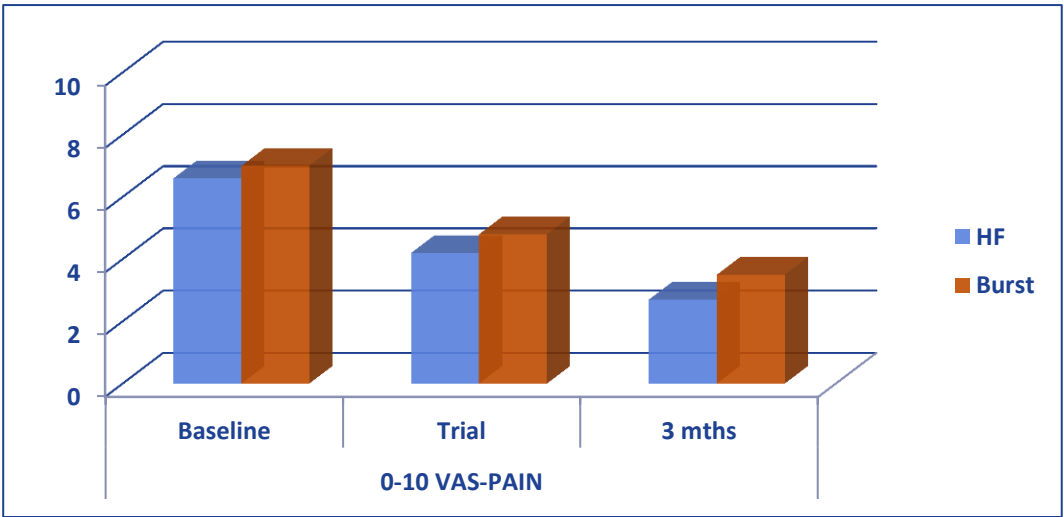
RESULTS:

Disability decreased significantly (p=.03)-Oswestry Disability Index ODI
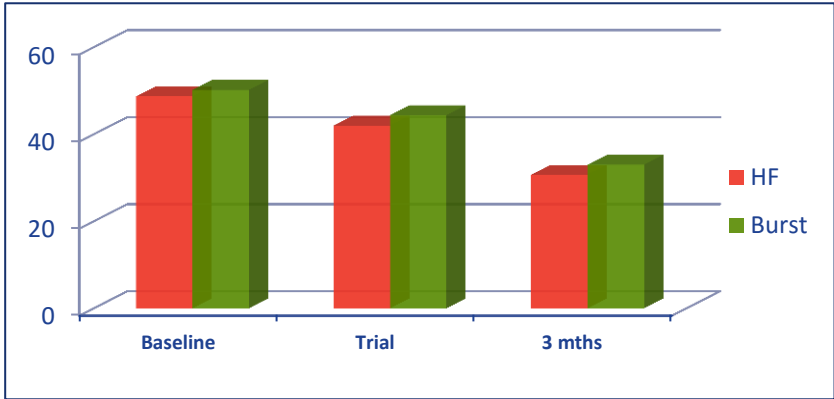
Psychological variables improved consequently. Choice was independent from the first stimulation experienced. No differences between the two stimulations were observed. No adverse events occurred.

Hospital Anxiety and Depression Scale_HADS

CONCLUSIONS:

Precision™ SCS promises to substantially affect the management of back and leg pain giving patients the chance to choose the most efficient stimulation. Further data are needed.