

Optimizing Outcomes and Patient Ease-of-use Through Automated Dose Management of Fast-Acting Sub-Perception Therapy

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BACKGROUND

Treatment of chronic pain using contemporary Spinal Cord Stimulation (SCS) devices now routinely involves the personalized delivery of therapy via application of highly customized neurostimulative settings and approaches per the specific preference and clinical response of each patient. As such, there is a large compendium of published studies that report positive clinical outcomes in patients with access to multiple SCS-based chronic pain treatment options within a single device.¹⁻⁵ Individualized automation of SCS programming (i.e., preset, automatic modulation of neurostimulative programming according to one’s schedule/activities/other) is yet another, more recently-introduced “customizable” feature provided on commercially-available SCS-systems that some patients do elect to utilize. Here, we present preliminary outcomes of Fast-Acting Sub-perception (FAST) implemented with a dosing regimen (FAST AutoDose) depending on patients’ preference and activity, as part of a multicenter, observational, case-series.

METHODS

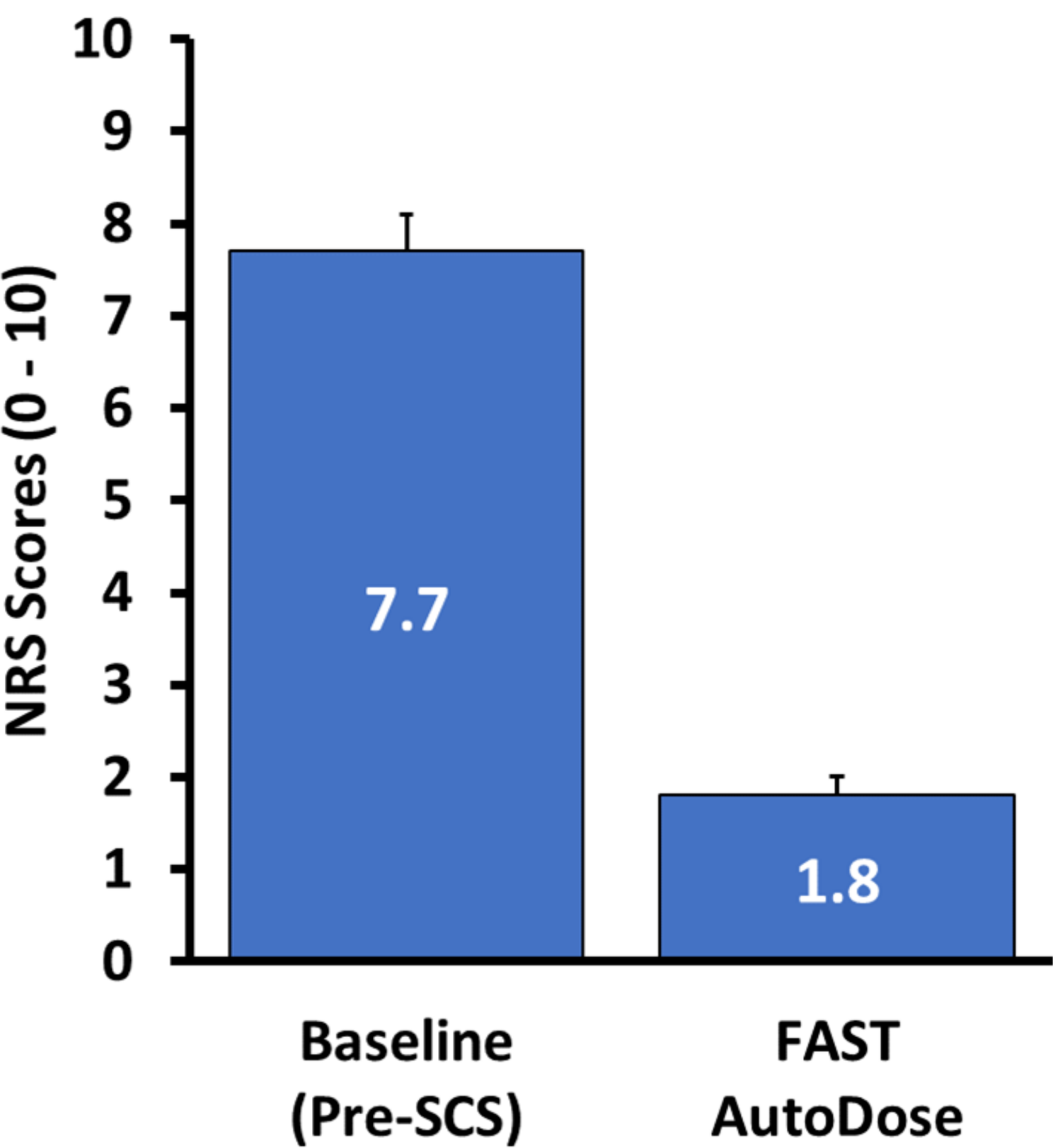
Study Design	Multicenter, Consecutive, Observational, Case-Series Data collected by site personnel only.
Study Device	Spinal Cord Stimulation (SCS) System (WaveWriter Alpha, WaveWriter, Precision Spectra, Boston Scientific): •Paresthesia-Guided Stimulation Field Targeting •Fast-Acting Sub-Perception Therapy (FAST) •Customized Field Shape Programming (Contour) •Illumina3D Algorithm with Multiple Independent Current Control (MICC)
Cohort	•12 chronic pain patients considered for SCS

RESULTS

Baseline Characteristics (n = 12)

Gender - Males (%)	33% (4/12)
Age [Mean (SD)]	61.0 (13.3) years n = 11
Pain Location (%)	Low Back Pain (100%)
	Low Back and Legs (100%)
Baseline NRS [Mean (SD)]	7.7 (1.4) n = 12

Pain Scores with FAST AutoDose



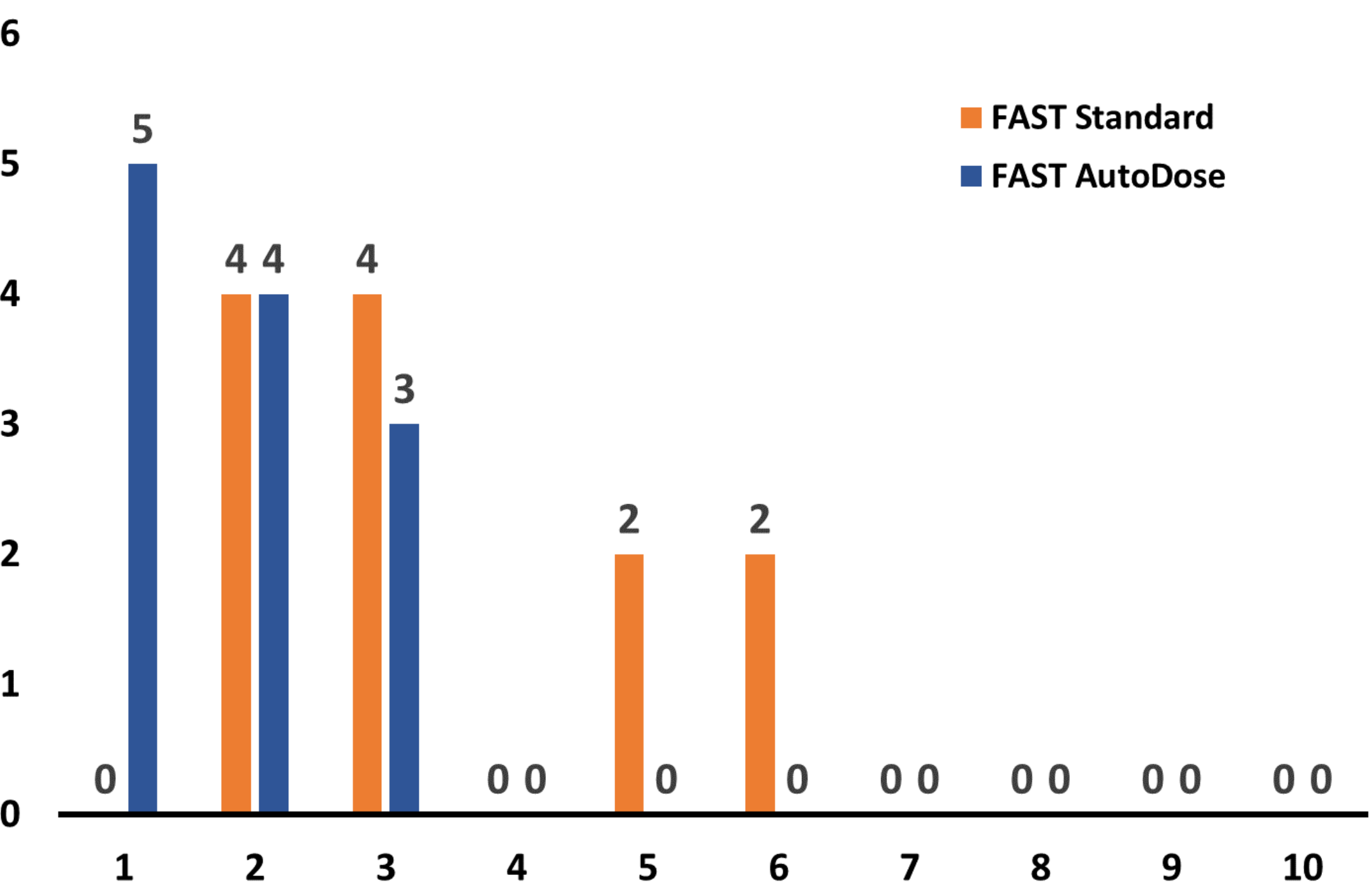
A 5.9-point improvement (7.7 →1.8) was noted with FAST AutoDose as compared with Baseline (p < 0.0001)

All patients received FAST-SCS followed by FAST AutoDose for up to 1-2 weeks

FAST AutoDose:

Schedules a proactive stimulation bolus within specified intervals to simplify the patient experience and reduce the potential of habituation.

Distribution of Overall Pain Scores with FAST Standard and FAST AutoDose (n = 12)



- All patients (12 of 12) using FAST AutoDose reported an overall pain score ≤3 compared with 67% (8 of 12) of patients using FAST Standard
- Using FAST AutoDose, FAST Standard non-responders* (n = 4) reduced their overall pain by a mean of 3 points

*Patients with pain score ≥5

CONCLUSIONS

- Preliminary results from this multicenter observational case series demonstrates that FAST AutoDose provides significant improvement in overall pain:
 - A 5.9-point improvement with FAST AutoDose (7.7 → 1.8, n = 12)
 - All patients (12 of 12) using FAST AutoDose reported an overall pain score ≤3
 - Using FAST AutoDose, FAST Standard non-responders (n = 4) reduced their overall pain by a mean of 3-points
- FAST AutoDose seeks to simplify therapy for patients by automating neural dosing for simplified therapy while providing improvement in pain scores.

REFERENCES

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DISCLOSURES

Study sponsored by Boston Scientific. Dr. Ferro has a consulting agreement with Boston Scientific. Yu Pei is an employee of Boston Scientific.

