

A “Stimulating” Case Report on Difficult to Control Chronic Lower Extremity Neuropathic Pain

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INTRODUCTION

- Chronic pain affects approximately 50.2 million Americans daily
- Neuromodulation is a common technology to turn to when other modalities fail
 - Spinal Cord Stimulators
 - Paresthesia based vs Paresthesia free
 - Continuous vs high frequency vs burst frequency
 - Intrathecal Drug Pumps
 - Peripheral Nerve Stimulators
 - Temporary vs Permanent

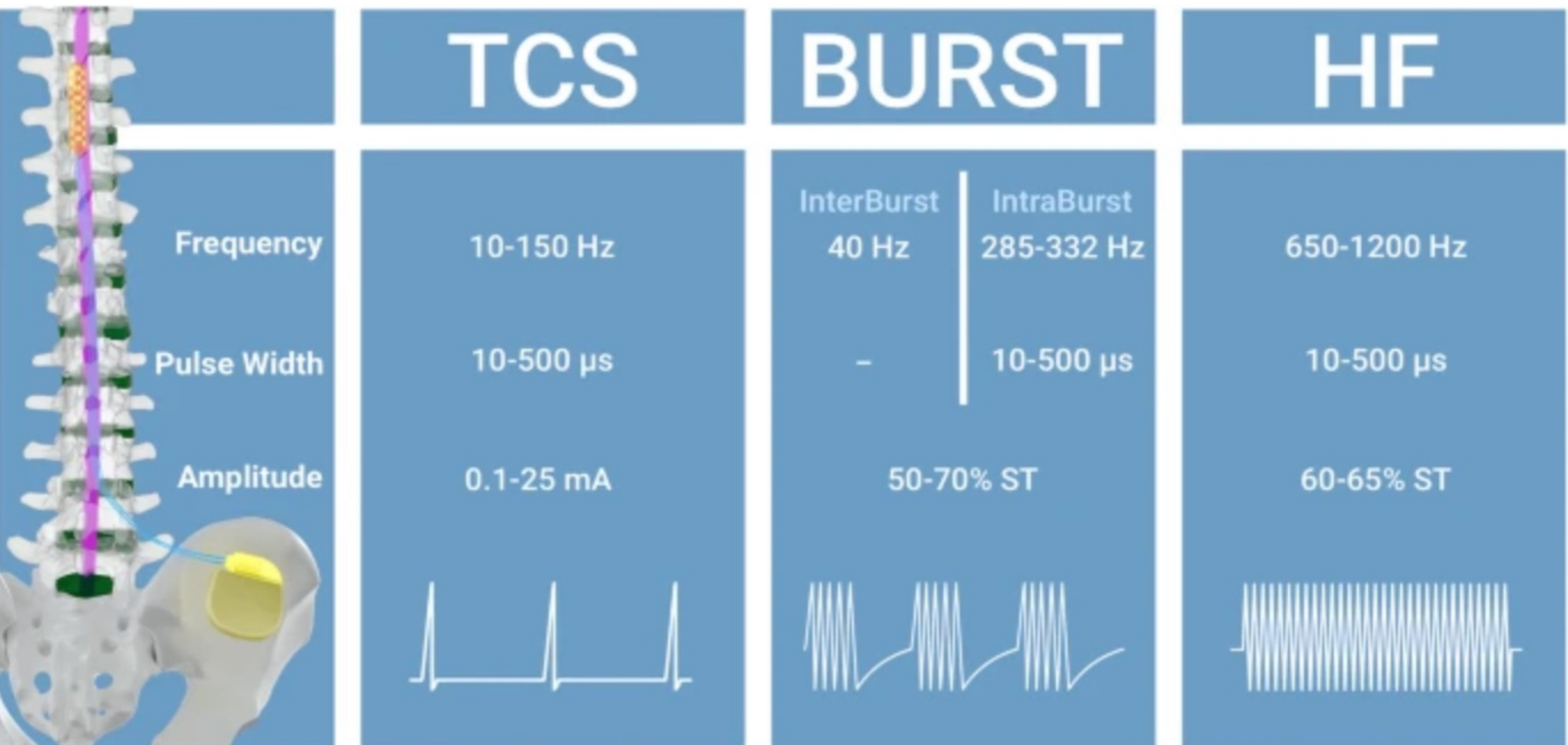


Figure 1: Comparing characteristics of Tonic Conventional Stimulation (TCS), Burst Stimulation, and High Frequency (HF)

Chronic neuropathic pain can be complex in treatment, especially after congenital injury.



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CASE PRESENTATION

- 59 year old female with history of congenital injury at birth resulting in chronic right lower extremity neuropathic pain
- Multiple surgeries: six right knee arthroplasties and femoral nail placement
- PO Pain Regimen:
 - Norco 15mg BID
 - Lyrica 100mg qHS (caused significant drowsiness)
- Underwent Spinal Cord Stimulator (SCS) placement 2020 (Paresthesia based/burst frequency model)
- Presented to clinic 2023 for second opinion → SCS causing significant painful paresthesia

INTERVENTION

- Attempted replacement to paresthesia free SCS but scar tissue significant → abandoned
- Given chronic opioid use, considered intrathecal pain pump, but unable to get intrathecal access → abandoned
- Temporary (60-day) Peripheral Nerve Stimulator (PNS) with two leads targeting femoral nerve → 80% relief in daily pain and reduced opioid dosing by 50%, but one lead dislodged and pain/opioid use increased
- Insurance approved repeat Temporary PNS → 85% pain relief and reduced opioid use by 75%, but when leads were removed pain/opioid use returned to baseline and now having significant constipation due to opioids

CONCLUSIONS

- Given excellent, but temporary, pain relief with 60 day PNS system → would be great candidate for permanent peripheral nerve stimulator → awaiting insurance approval
- Illustrates a complex case of chronic neuropathic pain after congenital injury and multiple extremity surgeries
- Highlights multiple treatment approaches and modalities as well as side effects/complications