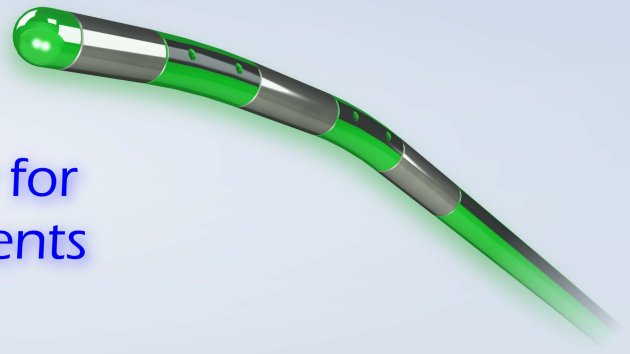




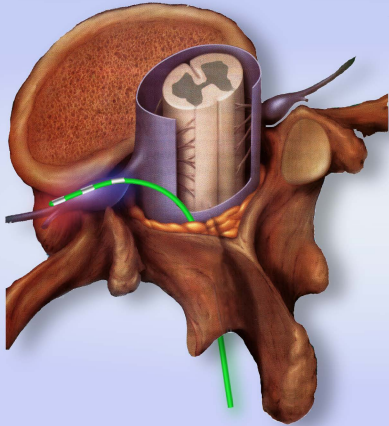
PulSTrode

Pulsed
Radiofrequency

a new
frontier
for pain
treatment



Multifunctional Electrocatheter for Pulsed Radiofrequency Treatments



Indications:

Spinal radiculopathies
FBSS
Post-Herpetic syndrome
CPRS
Trial SCS

A fast, easy and safe treatments

Spinal pathologies are very frequently source of acute and chronic pain.

An effective minimally invasive therapy is represented by Pulsed Radiofrequency Neuromodulation on the nervous roots of the epidural space.

With PULSTRODE each level is achievable, allowing to combine pharmacological treatments and lysis of epidural adhesions.

Thanks to the raw materials used and adjustable tip (SCS method), PULSTRODE allows to reach multiple levels in the same patient and also treat bilateral complex pathologies.

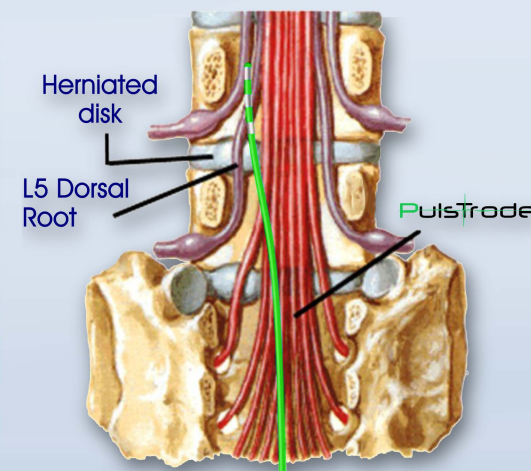
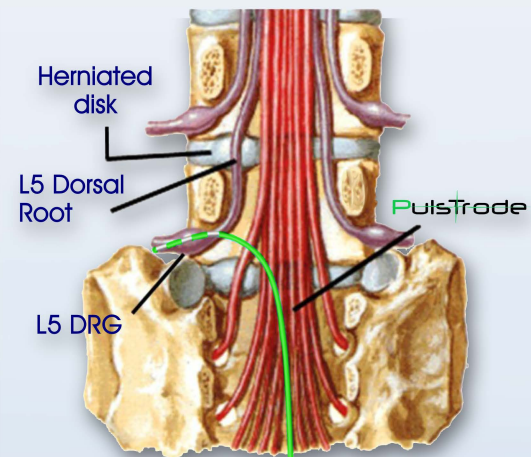
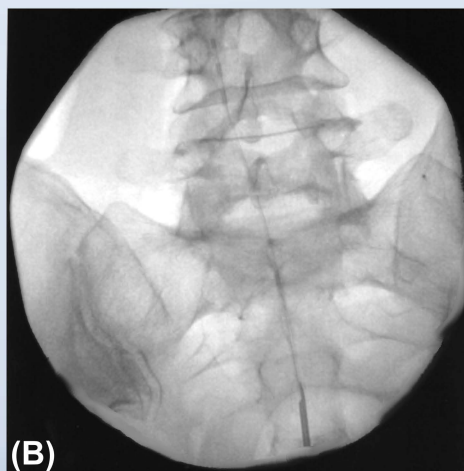
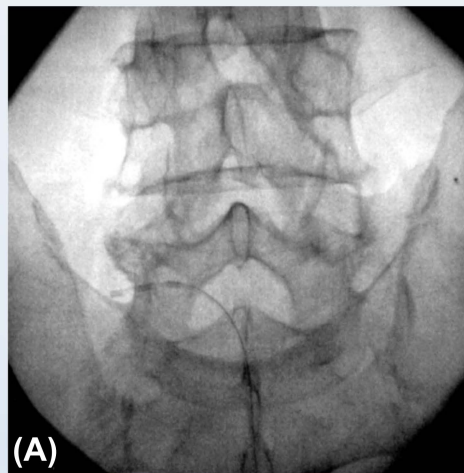
Results and perspectives have a medium and long term duration.

Double Target Approach

Considering the cauda anatomy, frequently the neural lesion area and the first pain modulation station are placed in two next levels. That's why is better to treat both of them.

(A) Under fluoroscopic view, the catheter is guided to the intraforaminal position near to each DRG target, that represents the site of the first sensory neuron.

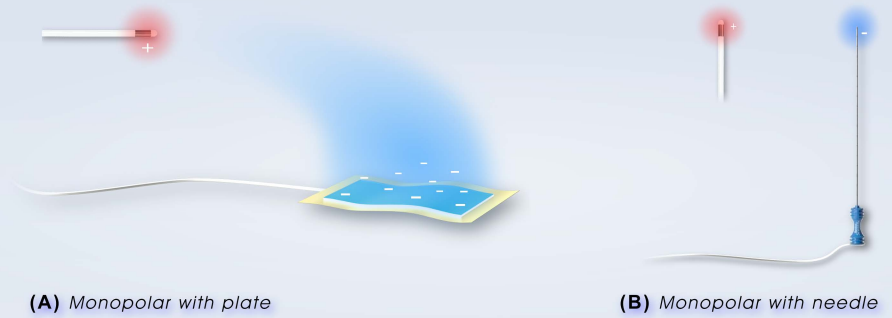
(B) Then is treated the upper DRG, where is identified the neural injured tract. It's possible to find in this site all sorts of the lesions (disc compression, inflammation, fibrosis, scar tissue).



Traditional Systems

(A) Monopolar with groundplate: the electrical circuit is closed on a plate where the dispersed energy is re-channelled in the circuit.

(B) Monopolar with ground needle: the needle performs the same function of the groundplate with the difference that in this case the current is not dispersed.



(A) Monopolar with plate

(B) Monopolar with needle

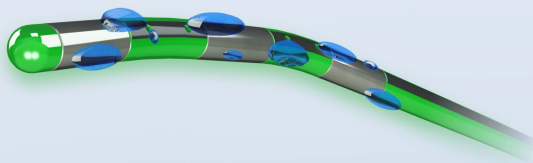
GROUNDPLATE NEITHER NEEDLE HAVE ANY CLINIC FUNCTION.

The Bipolar Radio Frequency Field with Pulstroke

A bipolar field, relatively to the playing powers, exists only for fields smaller than 20 mm and with two opposite active poles.

PULSTRODE does exactly this!! By using the integrated microswitch, it allows to generate a "SMALL" bipolar field more precise and intense (11 mm), or a "LARGE" one wider and diffused (17 mm).

You don't need any pad or needle, the field is really bipolar. There is no dissipation of energy, which is instead fully radiated in the target area.

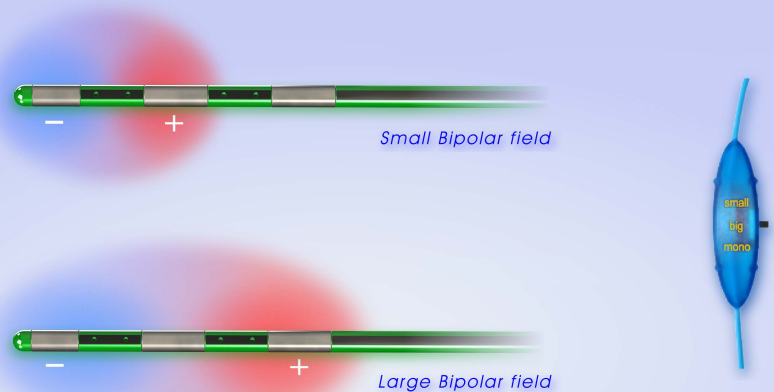


Four holes on the tip allow the local drugs injection easing ultra selective pharmacological treatments (cortisoidi, local anesthetics, washing with physiological, or contrastografie, hyaluronidase, etc.).

The flexibility of the tip, with two different stiffness, allows the mechanical treatment as lysis of adhesions or epidural fibrosis.

The possibility to leave the catheter in place by using a special splittable introducer, allows to repeat the procedure after some days, so as to apply an elastomer for continuous release of medication.

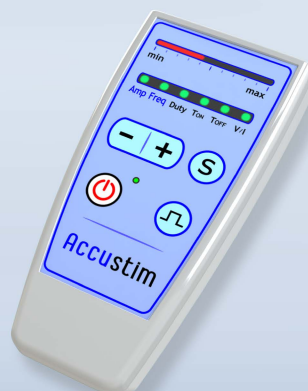
But the big utility is mainly represented by the possibility to perform a test about real effectiveness of an eventual future SCS neurostimulation implant.



Compatible use on patients with active prostheses.



PULSTRODE is equipped with a thermocouple to monitor the temperature and work in absolute safety.



ACCUSTIM™ is an external neurostimulator for the patient, used for trial SCS, or treatments for up to a month.

A RETROSPECTIVE EVALUATION

PULSED RADIOFREQUENCY OF THE DORSAL ROOT GANGLIA IS SUPERIOR TO PHARMACOTHERAPY OR PULSED RADIOFREQUENCY OF THE INTERCOSTAL NERVES IN THE TREATMENT OF CHRONIC POSTSURGICAL THORACIC PAIN

Steven P. Cohen, MD, Anthony Sireci, BA, Christopher L. Wu, MD, Thomas M. Larkin, MD, Kayode A. Williams, MD, and Robert W. Hurley, MD, PhD

Background: Chronic postsurgical pulsed RF of the intercostal nerves (ICN) who did report a successful outcome, thoracic pain (CPTP) represents a major and pulsed RF of the dorsal root ganglia the mean duration of pain relief was 2.87 therapeutic challenge characterized by an (DRG) in CPTP. months in the ICN group and 4.74 months

Technical Features:

- ♦ Bipolar Electrode - 4 Fr diameter
- ♦ 39 cm length
- ♦ 3 active electrodes
- ♦ 2 available lengths of bipolar fields
- ♦ 4 holes on the drug injection lumen
- ♦ 2 available Stylets: straight and curved



14 Gauge Introducer, resterilizable with atraumatic tip for epidural access. Available lengths 10 cm and 14 cm.



PULSTRODE / EASYTRODE can be left in site for extended applications, using the 4 Fr splittable Introducer.

ORIGINAL ARTICLE

Pain Practice
Volume 5, Issue 2, pp 111-113, June 2005

Pulsed Radiofrequency for Radicular Pain Due to a Herniated Intervertebral Disc—An Initial Report

Alexandre Teixeira, MD^{*}; Magnus Grandinson, MD[†]; Menno E. Sluiter, MD[‡]

^{*}Clinica de Dor, Oporto, Portugal; [†]Department of Radiology, Zentrum hospital, Biel, Switzerland; [‡]Pain Unit, Swiss Paraplegic Center, Nottwil, Switzerland

Abstract: Pulsed radiofrequency (PRF) has been used for the treatment of radicular pain, due to a herniated intervertebral disc, but so far the data are anecdotal. This is a retro-

It is concluded that PRF may potentially be a viable alternative for epidural steroid injections in the treatment of acute radicular pain, due to a herniated intervertebral disc, and

EDITORIAL

Pain Practice
Volume 5, Issue 2, pp 74-76, June 2005

Pulsed Radiofrequency in Chronic Pain Management: Looking for the Best Use of Electrical Current

Jan Van Zundert, MD, FIPP^{*}; Alex Cahana, MD, DAAPM[†]

^{*}Multidisciplinary Pain Unit, Ziekenhuis Oost-Limburg, Genk, Belgium and Department of Anesthesiology and Pain Management, University Hospital Maastricht, Maastricht, The Netherlands; [†]Interventional Pain Unit, Geneva University Hospital, Geneva, Switzerland

We want to congratulate Dr. Teixeira and his colleagues with their publication in this issue of *Pain Practice*. They report long-term results on pulsed radiofrequency (PRF)

intensity was observed in patients with the diagnoses of disc herniation and spinal stenosis. No significant improvement was seen in patients with failed back sur-

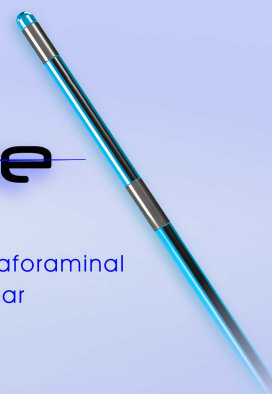
EasyTrode

Specifically designed to stay in site and to perform not complex applications.



miniTrode


Specifically designed for intraforaminal access. The thinnest RF bipolar electrocatheter in the world! Only 1 millimeter diameter!



Devices with fixed-length bipolar field and infusion lumen. Devices without microswitch.

Device	Code	Description
Pulstrode	PT 39-4	Electrocatheter for Pulsed Radiofrequency 4 FR – 3 poles
Easytrode	ET 39-4	Electrocatheter for Pulsed Radiofrequency 4 FR – 2 poles
Minitrode	MT 20-3	Electrocatheter for Pulsed Radiofrequency 3 FR – 2 poles

Distributor

 made in ITALY

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