Cleveland Clinic Innovations

Spinal Cord Buried Trial Removal Accessory

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PRODUCT

Device for easy removal of buried leads in spinal cord stimulation trials outside of the operating room

INDICATION

Neuro-stimulations, spinal cord stimulation

VALUE PROPOSITION

- Existing solutions are not optimal because they require a 2nd surgical procedure.
- This accessory eliminates the need for additional OR time.
- Improved conversation rates for trial to permanent SCS.

DEVELOPMENT STAGE

Prototype development

INTELLECTUAL PROPERTY

Patent Pending

PARTNERING OPPORTUNITY

Development and commercialization partnership

CONTACT INFORMATION

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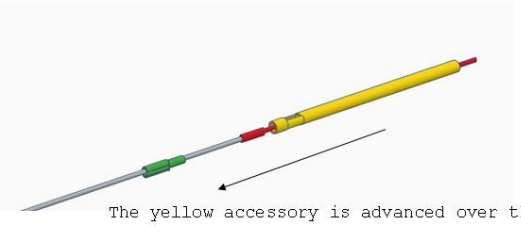
UNMET NEED

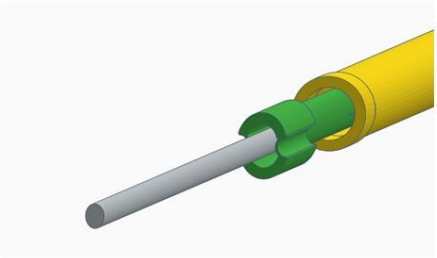
During spinal cord stimulation (SCS) treatment, a trial electrode is used to determine if a patient is responsive to treatment. A temporary wire is tunneled under the skin of the patient for the trial. Permanent implant involves two new wires inserted into the epidural space – this is the riskiest part of the procedure as residual scar tissue makes connecting the permanent leads more challenging. An alternative method known as a “buried trial” involves buried leads anchored beneath the skin. An extension is then used with a temporary generator and a permanent lead is also placed. A significant issue with buried lead trials is that a second surgery is required, whether to remove the buried lead in the case of a failed trial or to implant a battery in the case of a successful one.

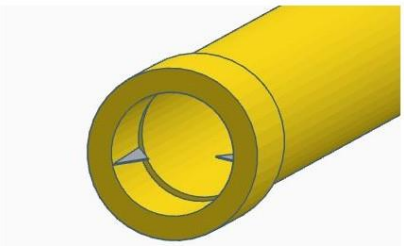
SOLUTION

This invention is a tool and method that eliminates the need of returning to the OR in the case of a failed trial. The device would allow for easy removal in-office and would reduce one of the largest sources of complications in spinal cord stimulation. The invention would include an accessory that would be placed over the permanent electrode and include an embedded cutting tool during the index operation. The accessory would be advanced over the anchor during the initial procedure and would allow for removal of the trial lead without requiring an additional surgery.



The yellow accessory is advanced over the anchor.





These images demonstrates the yellow accessory device fitted with 2 blades internally. The blades are protected around the anchor within the grooves of the green anchor.