Minimally Invasive Interfascicular Nerve Stimulation System for Pain Management Dustin TylerPhD,Jenifer SweetMD Department of BiomedicaEngineeringCaseWestern Reserve University

Need

Chronic pain is a complex, poorly understood disease AI- though severaltreatments exist for its management, one in five adults still suffer from unmanaged chronic pain in the US Chronic neuropathic pain specifically affects nearly 10 million Americans The continuum of pain management includes pharmaceuticals physical therapy, injections, surgical intervention, and neuromodulation. Spinal cord stimulation (SCS)s currently the most common neuromodulation intervention. Patients report extensive side effects with pharmaceutical treatment and drug resistance over time. Surgical and SCS interventions are invasive and very expensive

Many patients are on multiple treatments simultaneouslyto managetheir pain. Evenwith all these availabletreatments, 50% of patients report less than 50% pain reduction. Unmanagechronic neuropathic pain has multiple co-morbidities including but not limited to increased cardiovascular risk, cognitive decline, sleep udisorders, and early mortality.

Device



A "needle" canula is advanced under ultrasound visualization to the nerve. The MiiNS is advanced out of the canula, inserting mutuation the tines into the nerve. It is important to note that the tines will not penetrate through the perineurium and into the nerve bundles, but reside betweenthe bundles, minimizing the risk of nerve damage.

We seek commercialization partners with

Solution

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