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The Kinetra neurostimulator works through 2 channels to deliver bilateral therapy with a single device.

Kinetra contains a battery and microelectronic circuitry for controlled electrical pulse generation. The device is typically implanted subcutaneously near the clavicle. It generates electrical signals that get delivered by the extensions and leads to the targeted structures deep within the brain. Deep brain stimulation using the Kinetra neurostimulator was approved in 2003 for the treatment of symptoms due to Parkinson's disease and in 2009 it received an Humanitarian Device Exemption (HDE) for obsessive-compulsive disorder (OCD).*

Features

Simplified implantation and fewer incisions required, with only one neurostimulator needed for bilateral Therapy

Programming options that help prevent electromagnetic fields from inadvertently shutting off the neurostimulator

Gradual decrease in battery capacity, for better replacement planning More voltage and rate settings, for fine-tuning patient Therapy SoftStart/Stop® mode for smoother transitions

Day-cycling mode that automatically turns the neurostimulator off at night Ability to disable magnetic reed switch to prevent inadvertent shut-off from electromagnetic fields

Indications

Parkinson's Control Therapy:

Bilateral stimulation of the internal globus pallidus (GPi) or the subthalamic nucleus (STN) for adjunctive therapy in reducing some of the symptoms of advanced, levodopa-responsive Parkinson's disease that are not adequately controlled with medication. Obsessive-Compulsive Disorder Therapy*:

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Bilateral stimulation of the anterior limb of the internal capsule, AIC, as an adjunct to medications and as an alternative to anterior capsulotomy for treatment of chronic, severe, treatment-resistant obsessive-compulsive disorder (OCD) in adult patients who have failed at least three selective serotonin reuptake inhibitors (SSRIs).

* Humanitarian Device: The effectiveness of this device for the treatment of obsessive-compulsive disorder has not been demonstrated.

References

Medtronic DBS Therapy Clinical Summary, 2009.

The Deep-Brain Stimulation for Parkinson's Disease Study Group. Deep-brain stimulation of the subthalamic nucleus or the pars interna of the globus pallidus in Parkinson's disease. N Engl J Med. 2001;345:956-63.

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