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Epidural Stimulation Benefits and Mechanism of Treatment

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Epidural stimulation is the application of forward in the treatment spinal cord problems. This forward treatment is a continuous flow of electrical current to the lower part of the spinal cord. This stimulation is carried out through a little chip which is implanted over the dura (protective coating) of spinal cord. A remote size smart phone controls the frequency and intensity of the electrical current. When the stimulator is on, specific sensory stimulations are combined with the intensive training, allows a paralyzed person to move their legs voluntarily. A device, a surgery and a world of unimaginable possibilities for people with the injuries of spinal cord. That's Epidural Stimulation, the most advanced treatment for empowering patients who have lost voluntary control of their limbs and must endure many other demoralizing spine-injury symptoms. It is a new beginning, approved by the FDA for trials, but available commercially only from Verita Neuro.

Benefits of Epidural Stimulation

During the epidural stimulation experimental therapy, the scientists observed that not "only" improvements of the motor system but also finds the better function of the autonomic nervous system.

Well-Being: Improvement in quality of life
Sexuality: Enhancement in sexual function
Bladder: Increase in bladder control
Movement: Progression in leg movements
Temperature: Progress in temperature regulation

Components of Epidural Stimulation

1. Neuro-stimulator – these generate electrical pulses according to the parameters. These are rechargeable or non-rechargeable.
2. Lead – lead are the thin wire which look like protective coating and electrodes near the tip. The role of the electrodes passes the electrical pulses to the stimulation site.
3. Clinical programmer – it is critical in mapping the process to use the program in the neuro-stimulator which is implanted.
4. Patient programmer – this is helpful when patient returns to home and to continue the rehabilitation process.

Mechanisms of Epidural Stimulation

The spinal cord contains complex circuits that are capable of processing information on their own without the need of control from the brain. The most striking example is reflexes, which are, by definition, involuntary and promote nearly instantaneous movement in response to a particular stimulus. The epidural stimulation effect is based on this particular capability. The electrical current is supposed to be able to 're-activate the spinal circuits', allowing the residual connection between the brain and the spinal cord to voluntarily control certain leg movements.

Remedies or Supportive Therapies

1. Mapping.
2. Occupational therapy.
3. Acupuncture.
4. Aquatic therapy.
5. Diet plans that are tailor made.
6. Supplements that boost our immune system.

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