

Public title:	A Clinical Cohort Study on the Efficacy Evaluation of Short-Term Epidural Electrical Stimulation in the Treatment of Cervical Spinal Cord Injury.
Primary sponsor:	Jiangsu Province Hospital
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Approved No. of ethic committee:	2024-SR-915
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Source(s) of funding:	The funding comes from the National Natural Science Foundation of China, with the grant number:82272499.
Objectives of Study:	Investigate the efficacy of short-term epidural electrical stimulators in treating acute cervical spinal cord injury and explore the subgroups of patients with spinal cord injury treated by epidural electrical stimulators that are more responsive to the therapy.
Inclusion criteria:	1. Patients of acute traumatic spinal cord injury aged between 18 and 75 years; 2. The ASIA grade ranges from A to C; 3. Receiving posterior laminectomy, decompression and internal fixation within 72 hours post-injury; 4. Continuing rehabilitation treatment for no less than 3 months after the operation; 5. Capable of cooperating with the standardized neurological examination in accordance with the ISNCSCI standard (encompassing patients on ventilators), and being both willing and able to engage in the follow-up of this research study, with a follow-up duration of a minimum of 1 year.
Exclusion criteria:	1. Spinal infections or tumors; 2. Skin infections in the vicinity of the surgical site; 3. Immune system deficiency disorders; 4. Other existing surgical contraindications; 5. Abnormalities in routine blood tests: white blood cell count $< 3 \times 10^9/L$, neutrophil count $< 1.5 \times 10^9/L$, platelet count $< 50 \times 10^9/L$; 6. Currently afflicted with relatively severe chronic ailments, metabolic conditions (such as diabetes), neurological and psychiatric maladies as well as neurotransmitter-linked diseases (like epilepsy, Parkinson's disease, etc.), active hemorrhagic patients, those with severe hypertension, severe thrombocytopenia, and hyperkalemia; 7. Concurrent severe craniocerebral injury with a GCS score of ≤ 8 ; 8. Pre-existing neurological disorders that impact patients' limb movement; 9. Peripheral nerve injuries due to trauma, interfering with the assessment of patients' limb function.
Study execution time:	From 2025-01-15 To 2027-12-31

Group:	Test group (implantation of short-range epidural electrical stimulator)	Sample size: 42
	Control group (without implantation of short-term epidural electrical stimulator)	Sample size: 84
Outcomes(Primary indicator)	American Spinal Injury Association impairment scale Spinal Cord Independence Measure European Myelopathy Score Japanese Orthopaedic Association Scores Walking Index for Spinal Cord Injury	