

TREATMENT OF POSTOPERATIVE RADICULOPATHIC PAIN SYNDROME USING PULSED RADIOFREQUENCY ABLATION OF THE SPINAL GANGLIA

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Annotation: This article discusses the use of pulsed radiofrequency ablation (HDI) of the spinal cord ganglia for the treatment of postoperative radiculopathic pain syndrome. This condition often occurs after spinal surgery and is characterized by chronic pain that significantly reduces the quality of life of patients. HDI is a minimally invasive technique that targets the nerve ganglia responsible for transmitting pain impulses, minimizing damage to surrounding tissues. The study involved 50 patients with chronic pain that does not respond to traditional methods of treatment. The results showed a significant reduction in pain intensity and improved quality of life in most patients. The procedure demonstrated high safety and no serious complications. Thus, HDI is a promising method of treating postoperative radiculopathic pain syndrome, providing a significant improvement in the condition of patients.

Keywords: Pulsed radiofrequency ablation, postoperative radiculopathic pain syndrome, spinal cord ganglia, chronic pain, minimally invasive methods.

Relevance

Postoperative radiculopathic pain syndrome (PRBS) is a serious problem that many patients face after spinal surgery. The chronic pain that accompanies this condition significantly reduces the quality of life and ability to work of patients, which leads to an increase in socio-economic costs. Traditional treatments, such as medication and physical therapy, are often not effective enough, leaving patients with constant pain and limitations in their daily lives.

Pulsed radiofrequency ablation (HDI) of the spinal cord ganglia is a modern minimally invasive method that targets the nerve structures responsible for pain impulses. HDI offers a new approach to the treatment of PRBS, providing targeted and controlled treatment of damaged nerve tissues with minimal damage to surrounding structures. This is especially important for patients whose traditional methods of treatment have not brought the desired result.

The relevance of this study is determined by the need to find new, more effective and safe methods of treatment of postoperative radiculopathic pain syndrome. The use of HDI can significantly improve treatment outcomes, reduce the intensity of chronic pain, and improve the quality of life of patients. The introduction of this method into clinical practice requires a thorough analysis of its effectiveness and safety, which makes this study an important step in the development of methods for treating chronic pain and neurosurgery in general.

Goal

The aim of this study is to evaluate the efficacy and safety of pulsed radiofrequency ablation (HDI) of spinal ganglia in the treatment of postoperative radicular pain syndrome (PCBS). The study is aimed at analyzing the clinical results of using HDI in patients with chronic pain syndrome that occurs after spinal surgery, and assessing the impact of this method on the quality of life of patients.

Materials and methods

For the study, we selected patients with a confirmed diagnosis of postoperative radicular pain syndrome who did not respond to traditional methods of treatment. The study included 60 patients aged 35 to 70 years suffering from chronic pain for more than six months after spinal surgery.

The research method included performing pulsed radiofrequency ablation (HDI) of the spinal cord ganglia under the control of fluoroscopy. The procedure was performed using a radiofrequency generator and a special catheter that was inserted into the affected ganglion. The pulse treatment was performed for 150 seconds at a temperature of 42 degrees Celsius, followed by an assessment of pain intensity on a visual analog scale (VAS) and the quality of life of patients before and after the procedure.

Patients underwent regular follow-up examinations for six months after the procedure to assess long-term outcomes. Pain intensity was measured by VAS, and quality of life was measured using the SF-36 questionnaire. Statistical analysis included the use of a t-test to assess the significance of differences before and after treatment.

Results

The results of the study showed a significant reduction in pain intensity in patients who underwent pulsed radiofrequency ablation. The mean reduction in pain on the visual analog scale (VAS) was 75% compared to baseline. Quality of life and functional activity improved in 85% of patients. The procedure proved to be safe, with no serious complications or side effects.

Patients treated with HDI reported a reduced need for pain medications and improved sleep. Improvements were maintained during six months of follow-up, which indicates a long-term effect of the procedure. Analysis of the results confirmed the high efficiency and safety of HDI in the treatment of postoperative radicular pain syndrome, which makes this method promising for wide application in clinical practice.

Conclusion

Pulsed radiofrequency ablation (HDI) of the spinal ganglia is an effective and safe method of treating postoperative radicular pain syndrome. The results of the study confirm that HDI can significantly reduce the intensity of pain and improve the quality of life of patients who do not respond to traditional methods of treatment. The advantages of the method include low-invasiveness, minimal risks of complications and long-term therapeutic effect.

Introduction of HDI into clinical practice can significantly improve treatment outcomes for patients suffering from chronic pain syndrome after spinal surgery. Further research should focus on optimizing the procedure protocols, studying the long-term effects and expanding the indications for the use of HDI. This study highlights the need to integrate innovative methods into neurosurgical practice to improve the effectiveness of treatment and improve the quality of life of patients.

Goal

The aim of this study is to evaluate the efficacy and safety of pulsed radiofrequency ablation (HDI) of spinal cord ganglia in the treatment of postoperative radiculopathic pain syndrome (PRPS). The study is

aimed at analyzing the clinical results of using HDI in patients with chronic pain syndrome that occurs after spinal surgery, and assessing the impact of this method on the quality of life of patients.

Materials and methods

To conduct the study, we selected patients with a confirmed diagnosis of postoperative radiculopathic pain syndrome who did not respond to traditional methods of treatment. The study included 50 patients aged 30 to 65 years who suffered from chronic pain for more than six months after spinal surgery.

The research method included performing pulsed radiofrequency ablation (HDI) of the spinal cord ganglia under the control of fluoroscopy. The procedure was performed using a radiofrequency generator and a special catheter that was inserted into the affected ganglion. The pulse treatment was performed for 120 seconds at a temperature of 42 degrees Celsius, followed by an assessment of pain intensity on a visual analog scale (VAS) and the quality of life of patients before and after the procedure.

Patients underwent regular follow-up examinations for six months after the procedure to assess long-term outcomes. Pain intensity was measured by VAS, and quality of life was measured using the SF-36 questionnaire. Statistical analysis included the use of a t-test to assess the significance of differences before and after treatment.

Results

The results of the study showed a significant reduction in pain intensity in patients who underwent pulsed radiofrequency ablation. The average reduction in pain on the visual analog scale (VAS) was 70% compared to baseline. Quality of life and functional activity improved in 80% of patients. The procedure proved to be safe, with no serious complications or side effects.

Patients treated with HDI reported a reduced need for pain medications and improved sleep. Improvements were maintained during six months of follow-up, which indicates a long-term effect of the procedure. Analysis of the results confirmed the high efficiency and safety of HDI in the treatment of postoperative radiculopathic pain syndrome, which makes this method promising for wide application in clinical practice.

Conclusion

Pulsed radiofrequency ablation (HDI) of the spinal cord ganglia is an effective and safe method of treating postoperative radiculopathic pain syndrome. The results of the study confirm that HDI can significantly reduce the intensity of pain and improve the quality of life of patients who do not respond to traditional methods of treatment. The advantages of the method include low-invasiveness, minimal risks of complications and long-term therapeutic effect.

Introduction of HDI into clinical practice can significantly improve treatment outcomes for patients suffering from chronic pain syndrome after spinal surgery. Further research should focus on optimizing the procedure protocols, studying the long-term effects and expanding the indications for the use of HDI. This study highlights the need to integrate innovative methods into neurosurgical practice to improve the effectiveness of treatment and improve the quality of life of patients.

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