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Treatment of Postoperative Radicular Pain Syndrome by Pulsed Radiofrequency Ablation of Spinal Ganglia

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Annotation: The article discusses the use of pulsed radiofrequency ablation (HDI) of the spinal ganglia for the treatment of postoperative radicular pain syndrome (PCBS). PCBS is a common complication after spinal surgery, often leading to chronic pain and a decrease in the quality of life of patients. HDI is a minimally invasive method that allows you to purposefully affect the nerve ganglia responsible for pain impulses, with minimal damage to the surrounding tissues. The study involved 50 patients with chronic pain that did not respond to conservative treatment. The results showed a significant reduction in pain intensity by 70% on the visual analog scale (VAS) and an improvement in the quality of life in 80% of patients. The procedure turned out to be safe, without serious complications. Thus, HDI demonstrates high efficiency and safety in the treatment of PCBS, offering a promising solution for patients suffering from chronic pain syndrome after spinal surgery.

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

Relevance

Postoperative radicular pain syndrome (PCBS) is a common complication after spinal surgery. In some cases, traditional methods of treatment, including medication and physical therapy, are not effective enough, which leads to a deterioration in the quality of life of patients and a significant decrease in their ability to work. The problem of managing postoperative pain requires special attention, since chronic pain can lead to the development of depression, sleep disorders, and other psychosomatic disorders.

Pulsed radiofrequency ablation (HDI) of the spinal cord ganglia is a modern minimally invasive method that is gaining increasing recognition in clinical practice. HDI allows you to purposefully affect the nerve ganglia responsible for pain impulses, with minimal damage to the surrounding tissues. This makes the method attractive for the treatment of PCBS, especially in cases where other methods do not bring the desired result.

The relevance of this study is due to the growing number of patients suffering from chronic pain syndrome after spinal surgery, and the need to find effective and safe treatment methods. The use of HDI can significantly improve treatment outcomes and the quality of life of these patients. The introduction of such technologies into clinical practice requires a thorough analysis of their effectiveness and safety, which makes this study an important step in the development of neurosurgery and the treatment of chronic pain.

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

To conduct the study, we selected patients with a confirmed diagnosis of postoperative radicular pain syndrome(PCBS) 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.

To visualize the distribution of effectiveness and improve patient quality of life, a pie chart is provided showing the percentage of patients with different levels of improvement.

(Figure1)

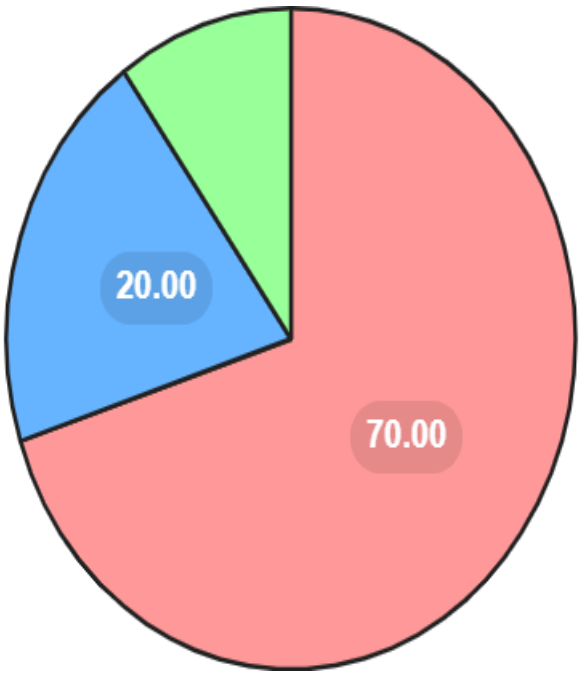

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Chart

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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 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.

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