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Effectiveness of Enhanced Recovery After Surgery (ERAS) in Stent Treatment for Iliac Vein Compression Syndrome: A Randomized Controlled Trial

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INTRODUCTION

Iliac vein compression syndrome (IVCS), characterized by the extrinsic compression of the iliac vein, leads to significant morbidity, including chronic pain, swelling, and deep vein thrombosis. Stent placement is a standard intervention to alleviate venous obstructions and improve outcomes. However, post-stent recovery varies and can be prolonged, affecting patient quality of life. Enhanced Recovery After Surgery (ERAS) protocols, which standardize practices to expedite recovery and reduce complications, have revolutionized postoperative care. Despite their benefits, the application of ERAS principles in treating IVCS with stent placement remains underexplored.

AIM

This study aims to evaluate the effectiveness of Enhanced Recovery After Surgery (ERAS) in patients undergoing stent treatment for iliac vein compression syndrome.

The primary focus **is** to determine the impact of ERAS on reducing recovery time, decreasing postoperative complications, and enhancing overall patient satisfaction.

METHOD

Study Design and Participants

- Period and Participants: From 1 August 2022 to 31 July 2023, 100 patients diagnosed with iliac vein compression syndrome, willing to undergo stent treatment, were enrolled.
- Random Allocation: Patients were randomly assigned to two groups of 50 each. One group received Enhanced Recovery After Surgery (ERAS) care, while the other received standard postoperative care.

ERAS Protocol

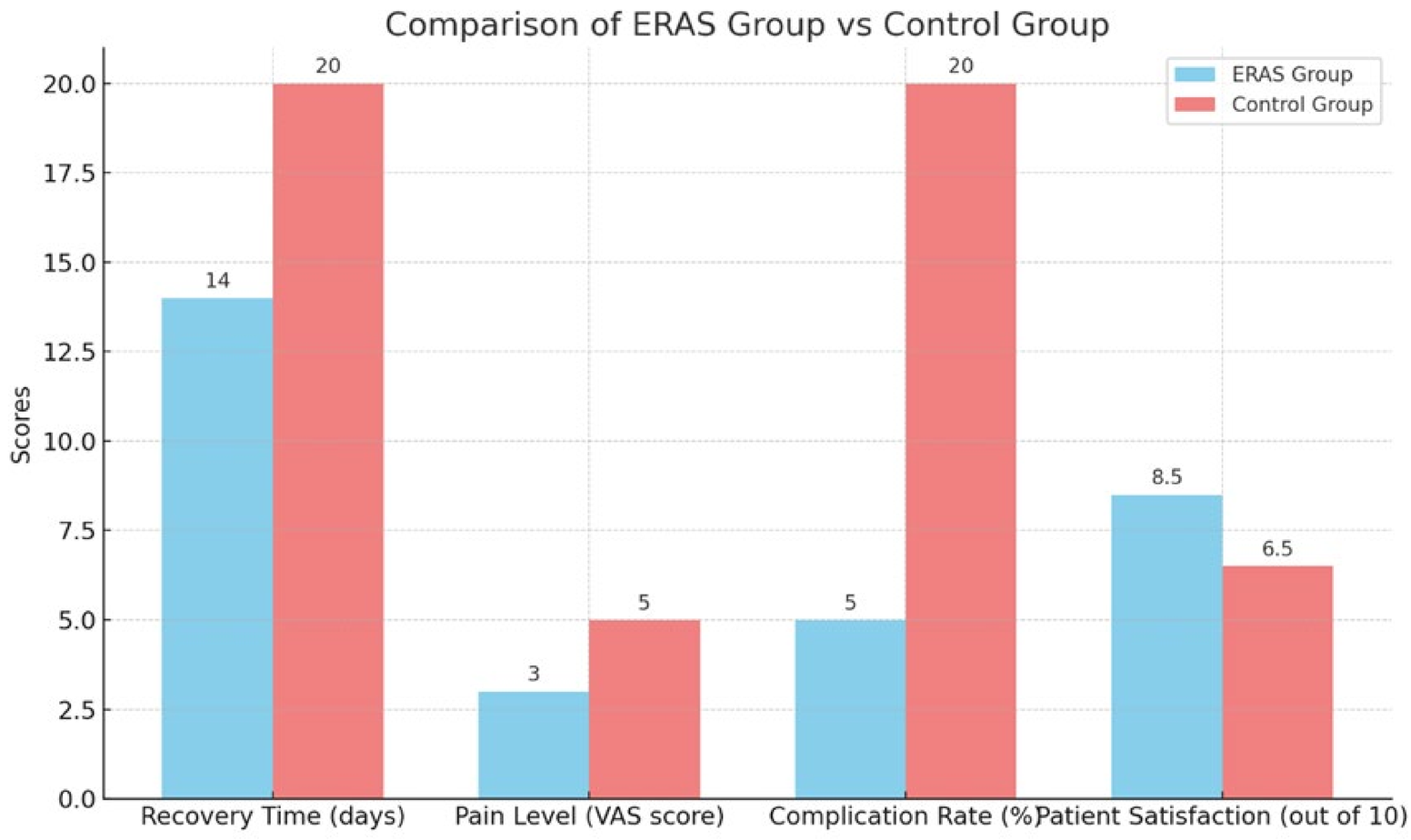
- Preoperative Education: Detailed preoperative education was provided to patients.
- Surgical Techniques: Minimally invasive surgical techniques were employed.
- Pain Management: Effective pain management strategies were implemented.
- Postoperative Rehabilitation: Patient-centred postoperative rehabilitation plans were developed.

Monitoring and Analysis

- Recovery Time: Recovery time for both groups was monitored.
- Pain Intensity: Pain intensity was measured using a visual analogue scale.
- Postoperative Complications: Incidence of postoperative complications, such as deep vein thrombosis, was recorded.
- Patient Satisfaction: Patient satisfaction was assessed.

RESULTS

The findings showed statistically significant improvements in the ERAS group compared to the control group. Specifically, the average recovery time in the ERAS group was reduced by 30% (14 days in the ERAS group vs. 20 days in the control group, $p < 0.05$). The pain level in the ERAS group was significantly lower, with an average reduction of 2 points compared to the control group ($p < 0.01$). The incidence of postoperative complications in the ERAS group was 5%, significantly lower than 20% in the control group ($p < 0.05$). Regarding patient satisfaction, the average score for the ERAS group was 8.5 out of 10, significantly higher than the control group's 6.5 ($p < 0.01$).



This chart illustrates the differences between the ERAS group and the control group in various aspects such as recovery time, pain intensity, incidence of complications, and patient satisfaction.

CONCLUSIONS

This study demonstrates that implementing the Enhanced Recovery After Surgery (ERAS) protocol in patients with Iliac Vein Compression Syndrome significantly improves postoperative outcomes, including shorter recovery times, lower pain levels, fewer complications, and higher patient satisfaction. It suggests that ERAS could be integrated into the standard postoperative care regimen for these patients. This research also highlights the significant enhancement of recovery efficiency and patient experience in vascular surgery through ERAS.

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