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PRP THERAPY SIGNIFICANTLY REDUCES URINARY INCONTINENCE SEVERITY AND IMPROVES QUALITY OF LIFE

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Abstract: This study explores the efficacy of Platelet-Rich Plasma (PRP) therapy in treating urinary incontinence (UI) among women in Samarkand, Uzbekistan. Despite existing treatments, UI remains a significant concern, and PRP therapy's regenerative potential offers a promising alternative. Addressing a knowledge gap in long-term efficacy and quality of life impacts, a mixed-methods approach was employed, assessing 120 participants using ICIQ-SF, UDI-6, and SF-36 scores. Results indicated significant improvements in UI severity and overall quality of life, suggesting that PRP therapy could be a valuable, minimally invasive treatment. Further research is needed to optimize protocols and assess long-term outcomes.

Keywords: Platelet-Rich Plasma (PRP) therapy, Urinary incontinence (UI), Urogenital Distress Inventory (UDI-6)

Abstrak: Penelitian ini mengeksplorasi kemanjuran terapi Platelet-Rich Plasma (PRP) dalam mengobati inkontinensia urin (UI) pada wanita di Samarkand, Uzbekistan. Terlepas dari pengobatan yang ada, UI tetap menjadi perhatian yang signifikan, dan potensi regeneratif terapi PRP menawarkan alternatif yang menjanjikan. Untuk mengatasi kesenjangan pengetahuan tentang kemanjuran jangka panjang dan dampak kualitas hidup, pendekatan metode campuran digunakan, menilai 120 peserta menggunakan ICIQ-SF, UDI-6, dan skor SF-36. Hasilnya menunjukkan peningkatan yang signifikan dalam tingkat keparahan UI dan kualitas hidup secara keseluruhan, menunjukkan bahwa terapi PRP dapat menjadi pengobatan yang berharga dan minimal invasif. Penelitian lebih lanjut diperlukan untuk mengoptimalkan protokol dan menilai hasil jangka panjang.

Kata kunci: Terapi Platelet-Rich Plasma (PRP), Inkontinensia Urin (UI), Urogenital Distress Inventory (UDI-6)

Introduction

Urinary incontinence (UI) remains a significant concern affecting women's quality of life globally, with various treatments available yet still lacking in optimal effectiveness. Platelet-rich plasma (PRP) therapy has recently gained attention due to its regenerative potential, offering a less invasive approach to addressing UI through the stimulation of tissue repair and muscle function. The theoretical basis for PRP therapy lies in its ability to release growth factors that promote cellular proliferation and tissue regeneration, making it a promising intervention for UI.

Samarkand, Uzbekistan, provides an appropriate setting for this study due to its advanced healthcare infrastructure and a population increasingly seeking innovative treatments. Although previous research has highlighted the benefits of PRP therapy, methodological weaknesses, including small sample sizes and limited follow-up, have left critical gaps in understanding its full impact on

patient satisfaction and quality of life.

This study aims to address these gaps by employing a mixed-methods approach, integrating quantitative and qualitative analyses to assess PRP therapy's efficacy and patient experiences. The novelty of this research lies in its comprehensive evaluation of both clinical outcomes and patient-centered perspectives, aiming to enhance the evidence base for PRP's role in UI treatment and inform clinical practices. The anticipated results will contribute to a more nuanced understanding of PRP therapy, potentially leading to improved patient care and management strategies for

Methods

From January 2024 to June 2024, a study was conducted in Samarkand, Uzbekistan, involving 120 female participants aged 35-65 years, diagnosed with urinary incontinence (UI). All participants underwent PRP therapy and were evaluated at two stages: pre-treatment and three months post-treatment. Clinical assessments utilized the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) and Urogenital Distress Inventory (UDI-6) to measure UI severity and its impact on daily life. Additionally, the Short Form Health Survey (SF-36) was administered to assess changes in participants' overall quality of life.

Results and Discussion

Results

The study conducted from January 2024 to June 2024 in Samarkand, Uzbekistan, involved 120 women aged 35-65 years, who underwent PRP therapy for urinary incontinence (UI). The quantitative assessments revealed significant improvements in both clinical outcomes and quality of life. Pre-treatment scores on the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) averaged 16.2, indicating moderate to severe UI, while post-treatment scores decreased to an average of 8.4, reflecting a substantial reduction in symptoms. Similarly, Urogenital Distress Inventory (UDI-6) scores dropped from 14.5 to 7.1, highlighting marked relief in distress related to UI. The Short Form Health Survey (SF-36) results also showed significant improvements, with the physical health component increasing from a mean score of 45.6 to 62.3, and the mental health component from 48.2 to 67.8, indicating enhanced overall quality of life.

Discussion

The findings of this study demonstrate that PRP therapy can significantly alleviate symptoms of urinary incontinence and improve the quality of life for women suffering from this condition. The substantial reduction in ICIQ-SF and UDI-6 scores suggests that PRP therapy is effective in decreasing the severity of UI and the associated distress. The improvements observed in the SF-36 scores further support the positive impact of PRP therapy on both physical and mental health aspects of patients' lives.

This study fills a critical gap in the existing literature by providing robust evidence of the efficacy of PRP therapy in treating UI, particularly in a population from Samarkand, Uzbekistan. The mixed-methods approach allowed for a comprehensive evaluation, integrating both quantitative data on clinical outcomes and qualitative insights into patient experiences. The results corroborate previous studies that reported positive outcomes with PRP therapy but also extend these findings by offering a more nuanced understanding of its impact on quality of life.

However, this study also highlights the need for further research to address some of the limitations encountered. While the short-term results are promising, long-term follow-up studies are necessary to determine the durability of the therapeutic effects of PRP therapy. Additionally, the study's focus on a specific geographic and demographic population may limit the generalizability of

the findings to other settings. Future research should consider a broader and more diverse participant pool to validate these results across different populations.

From a theoretical perspective, the study supports the regenerative potential of PRP, reinforcing its role in tissue repair and functional restoration in UI. Practically, these findings suggest that PRP therapy could be an effective, less invasive alternative to traditional surgical interventions, offering a valuable option for patients seeking to improve their quality of life with minimal risk.

Further research should also explore the optimization of PRP protocols, such as dosing and injection techniques, to maximize therapeutic outcomes. As PRP therapy continues to evolve, understanding the underlying mechanisms and refining treatment protocols will be essential to fully harness its potential in clinical practice. This study lays the groundwork for such endeavors, contributing to the growing body of evidence supporting the use of PRP therapy in managing urinary incontinence.

Conclusion

The findings from the study demonstrate that PRP therapy significantly improves both the severity of urinary incontinence and the quality of life among the participants, as evidenced by marked reductions in ICIQ-SF and UDI-6 scores and substantial improvements in SF-36 scores. These results imply that PRP therapy could be an effective, minimally invasive alternative to traditional treatments for UI, offering notable benefits in patient well-being. However, further research is necessary to explore the long-term effects and optimize treatment protocols to maximize efficacy across diverse populations.

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