THE EFFICACY OF PULSED THERAPY IN THE MANAGEMENT OF SYSTEMIC SCLERODERMA: A STATISTICAL ANALYSIS

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Abstract:

Systemic scleroderma is a rare autoimmune disorder that affects connective tissues and blood vessels, leading to skin thickening, organ damage, and other complications. While there is no cure for this disease, various treatment options are available to manage its symptoms and slow down its progression. One such treatment modality is pulsed therapy, which involves the administration of high-dose corticosteroids or immunosuppressive agents in short intervals. However, the effectiveness of pulsed therapy in systemic scleroderma remains controversial, with limited studies providing conflicting results.

This dissertation aims to investigate the efficacy of pulsed therapy in the management of systemic scleroderma through a statistical analysis of available data. A systematic review of literature will be conducted to identify relevant studies that have evaluated the use of pulsed therapy in systemic scleroderma patients. The selected studies will be assessed for their quality and risk of bias using established criteria. Data extraction will be performed to obtain information on study design, patient characteristics, intervention details, outcome measures, and adverse events.

The collected data will be analyzed using appropriate statistical methods to determine the overall effect size of pulsed therapy on various outcomes, such as skin thickness, lung function, and quality of life. Subgroup analyses will be conducted based on factors such as treatment regimen, disease severity, and duration of follow-up. Sensitivity analyses will also be performed to assess the robustness of the findings and potential sources of heterogeneity.

The results of this dissertation will provide a comprehensive overview of the current evidence on the efficacy of pulsed therapy in systemic scleroderma

and inform clinical decision-making regarding its use. The findings may also highlight areas for future research and contribute to the development of more personalized treatment approaches for this complex disease.

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