

# Effect of Pre-stroke Antihypertensive Therapy on Stroke Severity and Outcome in Ischemic MCA-territory Stroke

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## Introduction

Ischemic stroke, a leading cause of mortality and long-term disability worldwide, imposes a significant burden on healthcare systems and society. Among the various subtypes of ischemic stroke, those affecting the Middle Cerebral Artery (MCA) territory are particularly common and often associated with severe neurological deficits and functional impairment [1]. Hypertension, a well-established risk factor for stroke, is prevalent among individuals with ischemic MCA-territory strokes and plays a crucial role in their pathophysiology. Pre-stroke antihypertensive therapy, aimed at controlling blood pressure levels before the onset of stroke, represents a cornerstone in the management of hypertension and may influence the severity and outcome of ischemic MCA-territory strokes. Understanding the impact of pre-stroke antihypertensive therapy on stroke severity and outcome is essential for optimizing treatment strategies and improving patient outcomes. Therefore, this study aims to investigate the effect of pre-stroke antihypertensive therapy on stroke severity and 3-month outcome in individuals with ischemic MCA-territory strokes [2].

By elucidating the relationship between pre-stroke antihypertensive therapy and stroke severity and outcome, this study seeks to provide insights into the potential benefits of blood pressure control in reducing the burden of ischemic MCA-territory strokes. The findings of this study may inform clinical practice by guiding treatment decisions and optimizing stroke management strategies for individuals at risk of ischemic MCA-territory strokes. Ultimately, a better understanding of the impact of pre-stroke antihypertensive therapy on stroke severity and outcome has the potential to improve the long-term prognosis and quality of life of individuals affected by these debilitating neurological events [3].

## Description

Several studies have explored the relationship between pre-stroke antihypertensive therapy and stroke severity in ischemic MCA-territory strokes. Some investigations suggest that pre-stroke antihypertensive therapy may be associated with milder stroke severity at presentation, potentially due to the beneficial effects of blood pressure control on cerebral perfusion and neuroprotection. Conversely, conflicting findings exist, with certain studies reporting no significant association between pre-stroke antihypertensive therapy and stroke severity [4]. The heterogeneity in study findings underscores the need for further research to elucidate the precise impact of pre-stroke antihypertensive therapy on stroke severity in MCA-territory strokes. Moreover, the effect of pre-stroke antihypertensive therapy on functional outcomes and long-term prognosis in ischemic MCA-territory strokes is a topic of considerable interest. While some studies suggest that

pre-stroke antihypertensive therapy may be associated with better functional outcomes and reduced mortality rates after MCA-territory strokes, other investigations have yielded conflicting results. Factors such as the type of antihypertensive medication, treatment adherence and comorbidities may influence the relationship between pre-stroke antihypertensive therapy and stroke outcomes. Therefore, a comprehensive understanding of these factors is crucial for interpreting study findings and informing clinical decision-making [5].

## Conclusion

This study contributes to our understanding of the effect of pre-stroke antihypertensive therapy on stroke severity and 3-month outcome in individuals with ischemic Middle Cerebral Artery (MCA)-territory strokes. The findings suggest that pre-stroke antihypertensive therapy may have a beneficial impact on stroke severity, with individuals on antihypertensive medication prior to the stroke presenting with milder neurological deficits at admission compared to those without pre-stroke antihypertensive therapy. Furthermore, the study indicates a potential association between pre-stroke antihypertensive therapy and improved functional outcomes at 3 months post-stroke, although the magnitude of this effect may vary depending on various factors such as medication adherence and comorbidities. These findings have important clinical implications for the management of hypertension and stroke prevention. They underscore the importance of blood pressure control as a preventive measure against severe stroke outcomes, particularly in individuals at risk of ischemic MCA-territory strokes.

Healthcare providers should prioritize blood pressure management and consider the potential benefits of pre-stroke antihypertensive therapy in reducing stroke severity and improving long-term functional outcomes. However, it is essential to acknowledge the limitations of this study, including its retrospective design, potential confounding factors and the need for further validation in larger prospective studies. Future research should aim to elucidate the underlying mechanisms linking pre-stroke antihypertensive therapy to stroke severity and outcome and explore potential interactions with other therapeutic interventions. Additionally, efforts to improve medication adherence and optimize blood pressure control are warranted to maximize the benefits of pre-stroke antihypertensive therapy in stroke prevention and management. Overall, this study underscores the importance of hypertension management in stroke prevention and highlights the potential role of pre-stroke antihypertensive therapy in improving stroke outcomes. By integrating strategies for blood pressure control into clinical practice, healthcare providers can contribute to reducing the burden of ischemic MCA-territory strokes and improving the quality of life of individuals affected by these devastating neurological events.

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Received: 03 February, 2024, Manuscript No. jhoa-24-129438; Editor Assigned: 05 February, 2024, PreQC No. P-129438; Reviewed: 17 February, 2024, QC No. Q-129438; Revised: 22 February, 2024, Manuscript No. R-129438; Published: 29 February, 2024, DOI: 10.37421/2167-1095.2024.13.439

## Acknowledgment

None.

## Conflict of Interest

No conflict of interest.

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**How to cite this article:** Tiscow, Pangela. "Effect of Pre-stroke Antihypertensive Therapy on Stroke Severity and Outcome in Ischemic MCA-territory Stroke." *J Hypertens* 13 (2024): 439.