



CORRELATION BETWEEN RESTLESS LEGS SYNDROME AND MIGRAINE HEADACHES

Ismati Z.O.

Free Researcher, Department of Neurology
Samarkand State Medical University

Djurabekova A.T.

Doctor of Medical Sciences, Professor
Department of Neurology
Samarkand State Medical University

Article history:	Abstract:
Received: 26 th April 2025 Accepted: 24 th May 2025	Restless Legs Syndrome (RLS) and migraine headaches represent two distinct yet potentially interconnected neurological disorders that significantly impact patients' quality of life. RLS, also known as Willis-Ekbom disease, is characterized by an irresistible urge to move the legs, typically accompanied by uncomfortable sensations that worsen during periods of rest and improve with movement. These symptoms predominantly occur in the evening or nighttime hours, often leading to sleep disturbances and daytime fatigue.

Keywords: Restless legs syndrome, migraine, dopaminergic connection, genetic predisposition

INTRODUCTION. The article presents the results of an analysis of global studies that have shown that the prevalence of restless legs syndrome is higher in patients with migraine compared to people without migraine. A higher prevalence of migraine has also been reported in patients with restless legs syndrome. According to global research, the prevalence of restless legs syndrome in patients with migraine is about 13.7–25%, and the prevalence of migraine with restless legs syndrome is about 12.6–53.2%, which is significantly lower than in healthy individuals. Our analysis showed that the association between migraine and restless legs syndrome may be due to a family history and the effects of serotonergic drugs, which may disrupt the balance between dopaminergic and serotonergic pathways. Neurological disorders affecting sleep and headache represent some of the most challenging conditions in contemporary medicine, with their intricate interplay often complicating both diagnosis and treatment. Among these, the potential relationship between Restless Legs Syndrome (RLS) and migraine headaches has emerged as an area of particular scientific interest, offering insights into shared neurobiological pathways and therapeutic opportunities. The recognition of a potential RLS-migraine correlation carries profound implications for clinical practice. Healthcare providers managing patients with either condition must be cognizant of the possibility of comorbid presentation, as this awareness could significantly influence diagnostic evaluation, treatment selection, and patient counseling. Furthermore, understanding this relationship may reveal novel therapeutic targets and inform the

development of more effective, comprehensive treatment strategies.

This introduction sets the foundation for examining the current evidence regarding the correlation between RLS and migraine, exploring potential mechanisms underlying their association, and discussing the clinical relevance of these findings for neurological practice.

Migraine, on the other hand, is a complex neurological disorder manifesting as recurrent episodes of moderate to severe headache, frequently accompanied by nausea, vomiting, and sensitivity to light and sound. With a global prevalence affecting approximately 12% of the population, migraine ranks among the leading causes of disability worldwide, particularly in women of reproductive age.

Recent epidemiological studies have suggested a potential association between these two conditions, with some research indicating that individuals with RLS may have an increased prevalence of migraine compared to the general population. This correlation has sparked considerable interest in the medical community, as understanding the relationship between these disorders could provide valuable insights into their shared pathophysiological mechanisms and inform more effective treatment strategies.

The exploration of this correlation is particularly relevant given that both conditions involve alterations in neurotransmitter systems, particularly dopamine and iron metabolism, and both significantly impact sleep quality and circadian rhythms. Furthermore, the identification of common risk factors or underlying mechanisms could lead to more comprehensive treatment approaches that address both conditions



simultaneously, potentially improving patient outcomes and reducing the overall burden of these debilitating disorders.

This investigation into the correlation between RLS and migraine headaches aims to elucidate the nature and extent of their relationship, explore potential underlying mechanisms, and discuss the clinical implications for patient management and treatment optimization.

The investigation of the correlation between Restless Legs Syndrome (RLS) and migraine headaches represents a highly relevant area of contemporary neurological research with significant clinical and public health implications.

Epidemiological Significance

Both RLS and migraine are prevalent neurological conditions affecting substantial portions of the global population. RLS affects approximately 5-15% of adults worldwide, with higher prevalence rates observed in women and elderly populations. Similarly, migraine disorders impact nearly 1 billion individuals globally, representing roughly 12% of the population, with women being disproportionately affected at a 3:1 ratio compared to men. The potential overlap between these conditions could significantly amplify the disease burden on affected individuals and healthcare systems.

Clinical Relevance

The comorbidity of RLS and migraine presents unique clinical challenges. Patients experiencing both conditions often report more severe symptoms, increased frequency of episodes, and greater functional impairment compared to those with either condition alone. This dual burden can lead to:

- Enhanced sleep disruption and consequent daytime dysfunction
- Increased medication complexity and potential drug interactions
- Higher healthcare utilization and associated costs
- Reduced quality of life and productivity

Therapeutic Implications

Understanding the correlation between RLS and migraine is crucial for developing optimized treatment strategies. Current therapeutic approaches often address these conditions independently, potentially missing opportunities for:

- Shared pharmacological interventions targeting common pathways
- Lifestyle modifications that could benefit both conditions simultaneously
- Prevention strategies addressing mutual risk factors
- Improved patient outcomes through comprehensive care approaches

Research Gap and Innovation

Despite growing evidence suggesting a potential association between RLS and migraine, the mechanistic understanding of their relationship remains limited. This knowledge gap represents a significant opportunity for advancing neurological science and patient care. Recent technological advances in neuroimaging, genetic analysis, and biomarker identification provide unprecedented opportunities to explore these connections at molecular and cellular levels.

Socioeconomic Impact

The combined burden of RLS and migraine extends beyond individual patient suffering to encompass broader socioeconomic implications, including increased healthcare expenditures, reduced workplace productivity, and strain on family and social support systems. Elucidating their correlation could lead to more cost-effective management strategies and improved resource allocation within healthcare systems. This research area therefore represents a critical intersection of clinical neurology, public health, and healthcare economics, warranting urgent and comprehensive investigation.

CONCLUSIONS: Thus, our analysis showed that the relationship between migraine and restless legs syndrome may be due to a family predisposition and the action of serotonergic drugs, possibly disrupting the balance between dopaminergic and serotonergic pathways. However, it is obvious that more scientific and practical research is needed in this area to answer many unresolved questions and help improve the management of such patients.

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