# Insomnia as a presentation of hypertension in a 37-year-old male: A case report

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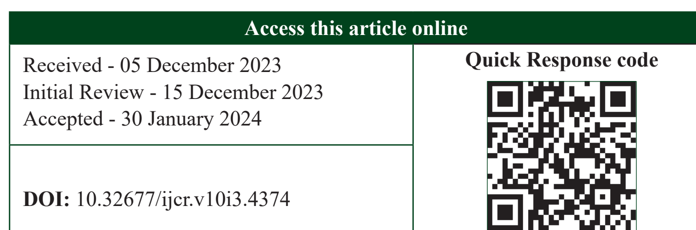
## ABSTRACT

This case report explores the rare presentation of insomnia as a symptom of hypertension in a 37-year-old male labor worker named Dinesh. Presenting with a 3-week history of insomnia, the patient's diagnosis of hypertension highlights the importance of considering systemic conditions in patients with nonspecific symptoms like insomnia. The report delves into the interplay between hypertension and sleep disturbances, emphasizing the influence of lifestyle factors, particularly alcohol consumption, on blood pressure and sleep quality. The case underscores the necessity for clinicians to be aware of atypical presentations of common conditions like hypertension, which is often asymptomatic in its early stages but can manifest in varied and unexpected ways. Through this case, the report demonstrates the effectiveness of a comprehensive management approach, combining pharmacological treatment with lifestyle modifications, in improving both hypertension and related insomnia, thereby emphasizing the need for holistic patient care.

**Key words:** Hypertension, Insomnia, Nonpharmacological management

Hypertension, commonly known as high blood pressure (BP), impacts a staggering 1 in 3 adults, and over 1.2 billion people globally are estimated to grapple with hypertension, making it a pressing public health concern [1]. Despite increased awareness and treatment options, the proportion of people with untreated hypertension remains alarmingly high. The burden also varies significantly across regions, with low- and middle-income countries facing a disproportionate impact. Unhealthy lifestyle choices, aging populations, and rising obesity further contribute to this concerning trend. Early detection and effective management are crucial to preventing complications such as heart disease, stroke, and kidney failure. Raising awareness about hypertension's global reach and its potential consequences can empower individuals and health-care systems to prioritize preventative measures and improve access to treatment. It is often labeled as a "silent killer" due to its asymptomatic nature in the early stages. Typically, hypertension is detected incidentally during routine medical checkups [2]. When symptoms do manifest, they are often vague and nonspecific, such as fatigue, shortness of breath, or nosebleeds, which are easily attributed to less severe health issues. However, there are atypical presentations of hypertension that can complicate its timely diagnosis. For instance, symptoms such as a severe headache, blurred vision, or chest pain are indicative of a hypertensive crisis, which requires immediate medical intervention. These presentations, while less common, underscore the variable nature of hypertension and its impact on different organ systems.



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The case of insomnia as a presentation of hypertension, as in this report, is particularly noteworthy. Insomnia, characterized by difficulty falling or staying asleep, is a common complaint in the general population and is often studied as a factor contributing to fluctuations in BP. However, its manifestation as a symptom of hypertension is not widely recognized in adults, although there have been studies about insomnia as a presentation of hypertension in children [3]. In the study, insomnia was reported as the second-most common symptom in hypertensive children. This oversight can lead to delays in the diagnosis and management of an underlying hypertensive condition [4].

The case presented here highlights the importance of considering systemic conditions such as hypertension in patients presenting with symptoms like insomnia. This approach is crucial for several reasons. First, it ensures a comprehensive evaluation of the patient, considering all possible underlying causes. Second, it facilitates the early detection and management of hypertension, which is vital in preventing its long-term complications, such as cardiovascular disease, renal damage, and stroke. Finally, understanding the atypical presentations of hypertension can enhance clinicians' diagnostic acumen, leading to more effective and holistic patient care.

## CASE REPORT

A 37-year-old male working as a day guard in a factory presents with a chief complaint of insomnia persisting for the past

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2 months. The patient leads a sedentary lifestyle and reports no use of caffeine or chronic medications. There was no significant family history of sleep disorders or cardiovascular diseases. The patient experiences difficulty initiating sleep, often taking more than 2 h to fall asleep. He reports waking up frequently during the night and averages a total of 4 h of sleep per night. Despite the lack of reported stressors, his work involves long hours, with a 10-h shift each day, which may contribute to his sleep disturbances.

Vital signs showed elevated (BP=160/90), normal temperature, respiratory rate, and pulse. Neurological, cardiovascular, respiratory, thyroid, and ear, nose, and throat examinations were within normal limits. A comprehensive workup including routine blood tests, thyroid function tests, metabolic and hormonal profiles, a chest X-ray, an electrocardiogram, and an electroencephalogram were all within normal limits.

The patient was educated on the principles of good sleep hygiene, which include maintaining a regular sleep schedule, creating a restful sleeping environment, and avoiding stimulating activities before bedtime. The importance of regular exercise and stress management techniques was emphasized to improve sleep quality and overall health. The patient was prescribed a combination of Amlodipine 5 mg and Atenolol 25 mg once daily, maintenance of a sleep diary, relaxation exercises, dietary modification, and advice to abstain from alcohol.

At follow-up, the patient showed a gradual improvement in insomnia symptoms. He reported better sleep initiation and fewer awakenings at night, which correlated with adherence to sleep hygiene principles and lifestyle modifications. His BP also responded well to the therapeutic regimen, with no reported side effects.

## DISCUSSION

The relationship between hypertension and insomnia is a complex interplay of physiological and lifestyle factors. Hypertension is known to affect the body's vascular system, and these changes can manifest in various symptoms, including insomnia. The patient presented here is a 37-year-old male who provides an opportunity to explore this intricate connection.

Chronic hypertension can lead to changes in the cardiovascular system that may impact sleep patterns [5]. Elevated BP can cause disruptions in the regulation of the sleep-wake cycle, potentially leading to insomnia. In addition, the stress and anxiety associated with living with a chronic condition like hypertension can further exacerbate sleep difficulties [6]. In Dinesh's case, his newly diagnosed hypertension might be contributing to his insomnia, either directly through physiological changes or indirectly through increased stress levels.

Lifestyle factors, particularly alcohol consumption, play a significant role in the management of hypertension. Alcohol can have a hypertensive effect, especially when consumed in large quantities [7,8]. It can also interfere with the effectiveness of antihypertensive medications. The patient presented here consumes 4–6 units of alcohol per week; this could be a contributing factor to his elevated BP. Reducing alcohol intake is a crucial step in managing hypertension [9] and could potentially improve his insomnia and headache symptoms.

Alcohol consumption, especially in the evening, can disrupt sleep architecture and lead to poor sleep quality [3]. It can interfere with the rapid eye movement stage of sleep, leading to a non-restful sleep experience [10]. For such patients as Dinesh, who already struggle with insomnia, alcohol can exacerbate these issues, leading to a vicious cycle of poor sleep and daytime fatigue.

## CONCLUSION

In this case report, the identification of hypertension in a 37-year-old male presenting with non-specific symptoms like insomnia and intermittent headache highlights the critical need for clinicians to consider systemic conditions in seemingly unrelated presentations. The present underscores the significant role of lifestyle factors, particularly alcohol consumption, in both the manifestation and management of hypertension. The implementation of lifestyle modifications, including reduced alcohol intake and relaxation techniques, alongside pharmacological treatment not only effectively managed his hypertension but also alleviated his insomnia and headaches. This case demonstrates the importance of a comprehensive approach to hypertension management, addressing both medical and lifestyle factors to improve patient outcomes.

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