

SLEEP AND CARDIOVASCULAR DISEASE

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Current state of knowledge

Sleep medicine has become an increasingly prominent field in routine clinical practice. Among the various conditions it addresses, insomnia stands out as the most prevalent disorder. According to the DSM-V¹, insomnia is characterized by dissatisfaction with the quantity or quality of sleep, meeting one or more of the following criteria: difficulty initiating sleep, difficulty maintaining sleep (frequent awakenings), or early awakening, occurring at least three times a week for a duration of three months, despite having the opportunity to sleep. The disturbance in sleep causes distress or clinically significant impairment in daytime functioning, as evidenced by at least one of the following criteria: fatigue, daytime sleepiness, alterations in attention, concentration, or memory, changes in mood or behavior, and a decline in work or academic performance or in social and family relationships.

Chronic insomnia affects 10% of the general population, while 25-35% experience it as a temporary symptom². Its prevalence is higher among the elderly (57%), women, and individuals facing unemployment, lack of a partner, and a low socioeconomic level³.

The DSM-V classification encompasses dyssomnias, including circadian rhythm disorders, parasomnias like sleepwalking, and secondary sleep disorders linked to neurological, psychiatric conditions, or medical illnesses, the latter being of particular significance. In chronic insomnia, it is crucial to take into account medications, drugs, and, notably within our clinical domain, systemic diseases that may manifest with this symptom.

Over the past decade, there has been a growing body of evidence associating insomnia with cardiovascular diseases and heightened mortality rates⁴.

It is crucial to obtain a comprehensive medical history, where information regarding the duration of insomnia and its nature—whether it involves difficulty falling asleep, maintaining sleep, early awakening, or a global pattern—is documented. Additionally, details about the sleep-wake cycle, such as bedtime and wake-up hours, latency period (typically less than 30 minutes), daytime sleep, and the

use of medications, coffee, alcohol, or drugs, should be recorded.

Risks

For several decades, it has been reported that the duration and quality of sleep are associated with increased mortality and reduced quality of life⁵.

- Prolonged insomnia is linked to a higher risk of experiencing new episodes of major depression and can serve as an independent risk factor for cardiovascular disease, hypertension, and diabetes, especially when combined with sleeping less than 6 hours⁶.

- Insomnia increases the risk of hypertension (HTN), heart failure (HF) and coronary heart disease, especially when sleep duration is short (< 6 hours)⁷.

- Individuals diagnosed with insomnia have a 21-24% higher risk of developing HTN compared to those who do not have insomnia^{8, 9}.

- The cumulative number of insomnia symptoms is associated with an increased risk of incident heart failure^{10, 11}.

- There is an important correlation between insomnia with increased arterial stiffness and carotid atherosclerosis¹².

- A significant correlation exists between insomnia and increases arterial stiffness and carotid atherosclerosis. Individuals with insomnia symptoms have a 41-55% higher risk of myocardial infarction, stroke, and coronary artery disease. Moreover, they are more likely to experience cardiovascular disease-related mortality^{13, 14}.

Recommendations

The first and foremost intervention involves ensuring that general practitioners and internists are well-versed in the subject, capable of diagnosing the underlying causes of insomnia, and proficient in formulating treatment strategies.

- Management of medical and psychiatric comorbidities, modifying medications or substances that alter sleep and optimizing sleep conditions.

- Sleep hygiene measures¹⁵(Table 1).

TABLA 1.– General measures considered in sleep hygiene are described (modified from López de Castro¹⁵)

- Behavior modification strategies and lifestyle changes¹⁵
- Cognitive behavioral therapy: The psychotherapeutic approach to insomnia is primarily grounded in behavioral and cognitive-behavioral interventions, with a sufficient level of evidence supporting their benefits¹⁵.
- Pharmacological therapy: the main medications used in general have weak recommendation weight and low quality of evidence and are the following: benzodiazepine receptor agonists such as eszopiclone, zaleplon and zolpidem, frequently used for sleep onset, in the case of zolpidem for sleep maintenance and new benzodiazepines such as triazolam for sleep onset and temazepam for sleep maintenance¹⁶.

Napping in the afternoon should be avoided, especially if one has had insufficient sleep during the night, or at the very least, it should not exceed 45 minutes.

The timing for both waking up and going to bed should be consistent.

“Heavy” foods should be avoided at dinner, as well as an excess fluid, alcohol, caffeine, nicotine.

Intense activities preceding bedtime should be avoided.

The sleep environment should ideally have low lighting and minimal noise.

One should go to bed only when sleepy.

It is advisable to establish a pre-sleep routine, such as enjoying a warm beverage while avoiding caffeine.

Reading, watching television, using a cellphone, or listening to the radio should be avoided in bed.

If sleep is not achieved within 45 minutes, it is acceptable to leave the bed and engage in a simple activity until sleep is regained.

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