Insônia está associada com a troca noturna para diurna da secreção da interleucina-6 e do fator de necrose tumoral

Chronic insomnia is associated with a shift of interleukin-6 and tumor necrosis factor secretion from nighttime to daytime.


Source
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Abstract
Chronic insomnia, by far the most commonly encountered sleep disorder in medical practice, is characterized by difficulty falling or staying asleep at night and increased fatigue during the day. Interleukin-6 (IL-6) and tumor necrosis factor (TNF) are fatigue-inducing cytokines, and the daytime secretion of IL-6 is negatively influenced by the quantity and quality of the previous night's sleep. We hypothesize that the poor quality of insomniacs' sleep is associated with a hypersecretion of these 2 cytokines during the daytime, which, in turn, correlates with the fatigue experienced by these patients.

Eleven young insomniacs (6 men and 5 women) and 11 (8 men and 3 women) age- and body mass index (BMI)-matched healthy controls participated in the study. Subjects were recorded in the sleep laboratory for 4 consecutive nights and serial 24-hour plasma measures of IL-6 and TNF were obtained during the 4th day. Insomniacs compared to controls slept poorly (sleep latency and wake were increased, whereas percentage sleep time was decreased during baseline nights, all P <.05). The mean 24-hour IL-6 and TNF secretions were not different between insomniacs and controls. However, the difference in the change (increase) of IL-6 plasma levels from midafternoon (2 PM) to evening (9 PM) between insomniacs and controls was significant (P <.01). Furthermore, cosinor analysis showed a significant shift of the major peak of IL-6 secretion from nighttime (4 AM) to evening (7 PM) in insomniacs compared to controls (P <.05). Also, while TNF secretion in controls showed a distinct circadian rhythm with a peak close and prior to the offset of sleep (P <.05), such a rhythm was not present in insomniacs. Finally, daytime secretion of TNF in insomniacs was characterized by a regular rhythm of 4 hours (P <.05); such a distinct periodicity was not present in controls. We conclude that chronic insomnia is associated with a shift of IL-6 and TNF secretion from nighttime to daytime, which may explain the daytime fatigue and
performance decrements associated with this disorder. The daytime shift of IL-6 and TNF secretion, combined with a 24-hour hypersecretion of cortisol, an arousal hormone, may explain the insomniacs’ daytime fatigue and difficulty falling asleep.