



Editorial

Insomnia of older people and use of benzodiazepines in Taiwan

Insomnia is a patient-reported problem, which is characterized by difficulty of falling asleep, maintaining sleep, or waking up too early. Although polysomnography or actigraphy can be an objective sleep measure, insomnia is not defined by a specific amount of sleep. Ultimately, individuals with insomnia cannot be distinguished reliably from good sleepers by self-reported sleep symptoms, such as sleep latency (time to fall asleep) or wakefulness after sleep onset lasting for longer than 30 minutes.¹ Insomnia disorders have been categorized as primary and secondary insomnia, depending on whether the sleep problem resulted from certain medical or mental disorders or from medication/substance use. Primary insomnia is also described as psychophysiological insomnia. Pathophysiological studies have suggested that patients with primary insomnia are hyperaroused during sleep and wakefulness.² Evidence supporting the hyperarousal state in insomnia includes elevated whole-body metabolic rate during sleep and wakefulness, elevated cortisol and adrenocorticotropic hormones during the early sleep period,³ and a smaller difference in regional brain metabolism between waking and sleep.⁴

The changes in sleep patterns of older people include reduced total sleep time, more daytime napping, and decreased sleep efficiency. Changes occur in their sleep architecture as well, such as less slow wave and rapid eye movement sleep, more stage I and II sleep, shorter rapid eye movement latency, and longer sleep latency. These changes in sleep patterns may be reported as insomnia among older people. The prevalence of insomnia in older people has been reported to range from 30% to 60%.⁵ The differences in epidemiology may have resulted from different study populations enrolled in each study, different definitions of insomnia, and so on. Eventually, the prevalence of insomnia symptoms and sleep dissatisfaction do not increase significantly with age,⁶ and healthy older people sleep as well as younger populations.

In this issue of the *Journal of Clinical Gerontology and Geriatrics*, Dr Tsou reports an epidemiological study to determine the prevalence and risk factors of insomnia among community-dwelling elderly in northern Taiwan.⁷ Although some similar studies have already been published,^{8,9} important phenomena reported in Tsou et al's study deserve attentions. First, advanced age was not associated with the prevalence of insomnia among community-dwelling healthy elderly individuals. This was compatible with the results of a previous review article⁵ and strengthened the observation. Second, in this study, risk factors for insomnia included physical symptoms, receipt of medication for chronic diseases, mental health status, living status, and perceived level of well-being. Identification of these risk factors deserves more

intervention studies to improve quality of sleep for patients with insomnia, thus improving their quality of life. The treatment strategies for insomnia included nonpharmacological and pharmacological approaches. The main nonpharmacological treatments were stimulus control therapy, sleep restriction therapy, relaxation therapy, cognitive therapy, and sleep hygiene education. In the elderly, behavioral therapies seemed to be as effective as pharmacological therapies,¹⁰ and they may have had more enduring effects after cessation.^{11,12} The major problem associated with current nonpharmacological therapies was not their efficacy, but the lack of awareness among clinicians and of sufficiently trained and skilled service providers.

In general, pharmacological therapy was initiated if nonpharmacological strategies did not show satisfactory improvement. The most commonly used pharmaceutical agents for insomnia were benzodiazepine or nonbenzodiazepine hypnotics. Huang and Lai¹³ explored prescription patterns and determinants of sleep-related medications prescribed to elderly outpatients with insomnia in Taiwan through the claim data of Taiwan's National Health Insurance, which showed that 11.14% of older people had been diagnosed with insomnia in 2001, and the most commonly prescribed sleep medications were lorazepam and zolpidem. However, the use of benzodiazepines among older people was not restricted to the treatment of insomnia, but encompassed many other psychiatric conditions as well. Another study investigated the prevalence and associative factors of benzodiazepine use among older people in outpatient settings,¹⁴ which showed that 1-year prevalence of benzodiazepine use was approximately 43%. Among them, 22% of older people continued the use of benzodiazepine for more than 6 months in 2002 and for 14% the prescribed dose was higher than the defined daily dose. Although women were more likely to receive benzodiazepines, both men and women demonstrated similar benzodiazepine use patterns. Mental disorders and previous exposures to higher cumulative dosages of benzodiazepines were associated with a higher chance of receiving benzodiazepines for a longer period of time and at a higher dosage. Based on the results of the aforementioned studies, benzodiazepine use among elderly people in Taiwan did not completely comply with treatment recommendations,¹⁵ but the associative factors for benzodiazepine use were similar to those reported in a previous study from Western countries.¹⁶ Use of benzodiazepines in older people increases the risk of falls and related injuries significantly, a finding that deserves extensive attention. Reducing the use of benzodiazepines in Taiwan was dependent on various factors. However, to screen the risk factors for insomnia and to prioritize the use

of nonpharmacological approaches may help minimize the use of benzodiazepines for older people.

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