Sleep disorders in cancer patients

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In the past, sleep disorders in cancer patients were not considered as important as other symptoms, yet they have recently been attracting increasing attention. An epidemiological study reported that the prevalence of sleep disorders in the general adult population was 12.2% in men and 14.6% in women [1]. While the incidence of sleep disorders in cancer patients varies depending on the type of cancer, the degree of progression, and the type of sleep disorder evaluation scale, a prevalence rate of 40–60% has been reported in previous studies [2–4], suggesting that sleep disorders are a significant problem in cancer patients.

A wide variety of issues may be related to sleep disorders in cancer patients, including psychological factors such as anxiety about cancer notification and recurrence, physical factors such as pain, dyspnea, and nausea, and direct or indirect effects of the use of anticancer drugs, analgesics, and hormones [5]. It has also been reported that inflammatory cytokines are involved in sleep–wake rhythms as cancer progresses [6], indicating that sleep disorders during treatment may be related to several background factors, which themselves are intricately intertwined. In a recent epidemiological study of general adults, Xu et al. [7] reported that perceived stress (PSS) may mediate the relationship between cancer patients and sleep quality (PSQI). There are also reports suggesting that relatively specific sleep disorders may occur at a higher rate in patients with cancer than in the general population, such as sleep apnea syndrome, which is more common in individuals with advanced lung cancer [8], periodic limb movement disorder, and abnormal sensation in the lower limbs, similar to restless legs syndrome, which was observed in approximately 40% of patients [9].

The problem of sleep during cancer treatment is a widespread occurrence, but the overall situation remains unclear. For example, although there have been many studies on

which cancer types have the highest incidence of insomnia [10], there is still no consensus on the matter. In addition, insomnia is reported to be more frequent in advanced cancers [11], although there are reports that insomnia is already present in more than 50% of patients at the time of cancer diagnosis.

Sleep disorders are considered to be one of the most important factors related to the deterioration of Quality of Life (QOL) in cancer patients. Epidemiological studies in the general population have shown that sleep disorders are a major factor in reducing the QOL of patients with cancer; other reports indicate that the presence of pure insomnia is associated with reduced quality of life and that the more severe the insomnia is, the greater the deterioration in the QOL [12]. In a recent report on QOL research in cancer patients, the simultaneous observation of insomnia with depression and pain was considered a “symptom cluster” [13]. Currently, sleeping pills, especially benzodiazepines, are the most commonly prescribed pharmacotherapy for sleep disorders in cancer patients [14]. It has been reported that newer, shorter-acting nonbenzodiazepines are safer and more effective than older, longer-acting benzodiazepines. Other nonpharmacological therapies, such as cognitive behavioral therapy (CBT) [15] and mindfulness-based stress reduction (MBSR) [16], have also been reported to be effective in improving sleep in some cancer patients.

Sleep disorders are common in cancer patients. A major variable in the deterioration of QOL, sleep disorders are considered an important symptom that should be treated along with depression and neuralgia. Clinically, there is a need for greater incorporation of the sleep medicine perspective in palliative medicine for cancer patients. Further progress in basic and clinical research in this field is expected in the future.

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