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## Hypnotics for patients with lung cancer

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**S**leep disturbance is a common problem among cancer patients (1-4). Previous studies showed that between 30% and 50% of cancer patients complained sleep disturbance (1-4). Unlike other psychologic correlates such as depression and anxiety, however, insomnia has received little attention. Also, most previous studies were characterized by samples composed of patients with heterogeneous cancer sites (1-3). Although hypnotics are the most commonly used treatment for insomnia in cancer patients, they can potentiate the respiratory suppression with possibly serious consequence especially in those with lung functional impairment. Therefore, we investigated the utilization of hypnotics in 496 lung cancer patients over a 10-year period.

The medical records of 496 sequential lung cancer patients who admitted to our hospital in January 1993 through December 2002 were reviewed. The patients ranged in age from 32 to 89, with a median age of 68, and 403 patients were male. One hundred and seventy-nine (36.1%) of the 496 patients were prescribed at least one hypnotic. Interestingly, the young and middle-aged patients (less than 70 years) were more frequently prescribed hypnotics than those with 70 years of age and over (40.3% vs. 31.3%,  $p=0.0378$ , chi-square test). There also was statistical difference in prescription of hypnotics between male and female patients (male, 32.3% vs. female, 52.7%,  $p=0.0002$ ). Besides, patients with early-staged lung cancer (stage IA-IIIB) had prescription hypnotics than those with metastatic lung cancer patients (stage IV) (46.2% vs. 34.0%,  $p=0.0340$ ).

Benzodiazepines were prescribed for 149 (83.2%) of the 179 patients. Of them, 100 and 49 was short- and middle-acting agents, respectively. No patients received long-acting benzodi-

azepines. There was no statistical difference in prescription of short- and middle-acting benzodiazepines between the two age groups ( $p=0.8419$ ). Among the 179 patients who had hypnotics, no patients developed severe delirium and CO<sub>2</sub> narcosis due to the prescription of hypnotics.

In the 1970s and the '80s, some investigators described that more than half of the cancer patients were prescribed hypnotics (4,5). To our knowledge, however, more recent information has not been reported whether hypnotics are still prescribed as frequently to cancer patients. In the present study, we showed that 36.1% of lung cancer patients had hypnotics, and that female, younger, and early-staged patients were prescribed hypnotics more frequently. It is well known that female have more distress than male, and the advanced-stage patients feel more distress than the early-staged patients (1-3). A few authors, however, indicated that younger patients had more distress than the elderly (5,6). Although we do not know the exact reasons why the younger and the early-staged patients in this study had hypnotics more frequently, we suppose that psychiatric distress of these patients might be an important factor, and physicians might prescribe hypnotics for these patients without fear of respiratory suppression. Treatment for insomnia should start with identification of a specific cause of sleeplessness, after that, medication or psychotherapy may be helpful. When using hypnotics, keep in mind possible complications, such as hypercapnia and CO<sub>2</sub> narcosis, especially in patients with lung functional impairment. Careful individualization of medication is appropriate.

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