Sleep Disorders Medicine

Thomas Roth

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The discipline of sleep disorders medicine began in the mid-1970s and has since experienced a rapid growth evidenced by an increase in the facilities evaluating physiological activity during sleep and in its practitioners. From 1975 to 1987, the annual increase in both the number of facilities and practitioners was about 30%. Sleep medicine is based on scientific knowledge of the neurophysiology of sleep as well as neural control of physiological activity during sleep.

A major conclusion of sleep research is that sleep is not merely the absence of wakefulness but is a complex, active process. Control of physiological activity during sleep is different than that of waking. Discoveries in control of respiration, cardiac function, and temperature regulation are the best examples of the differences between sleep and wake physiology. Sleep-related physiological processes clearly can place some patients at increased medical risk during sleep.

Sleep disorders medicine is a clinical specialty concerned with the diagnosis and treatment of patients with disorders of sleep and daytime alertness. The broad spectrum of disorders includes primary dysfunctions of the neural mechanisms of sleep and arousal (e.g., narcolepsy), sleep exacerbated medical conditions (e.g., chronic obstructive pulmonary disease), and disturbances associated with medical, psychiatric, or behavioral syndromes. Despite the multidisciplinary aspect of the field, there is the crucial commonality of the fundamental processes and disorders of the sleeping brain. Whereas many medical specialties deal primarily with disorders of a specific organ system, sleep disorders medicine is concerned with the phenomenon of sleep and its abnormalities, disorders of alertness, and the effects of normal sleep processes on other medical disorders.

It has long been known that sleep disorders are common. Formal epidemiological studies have demonstrated recently that over 25% of adults have occasional or frequent complaints about sleep and that drugs are prescribed for and used in connection with sleep complaints more than for any other therapeutic purpose. Moreover, sleep problems appear to be associated with mortality risk. It is well documented that more people die in the early morning hours than at any other time of day, presumably with some association to sleep. Further, morbidity and mortality rates and how long an individual reports sleeping each night are strongly correlated, with both of these increasing significantly at the extremes of four and ten hours. Although the nature of these relationships is still unclear, disturbances of sleep and alertness in some way have an impact on survival.

The papers presented in this issue of the Journal are not intended to provide a review of the entire field. Instead, they attempt to identify to the reader some of the issues addressed in sleep disorders medicine. Included are papers on disorders of sleep and breathing and their treatment, as well as those on other sleep-wake symptoms such as insomnia and excessive daytime somnolence. We hope these papers will stimulate interest in further reading of the new and exciting discipline of sleep disorders medicine.