Clinical Management of Insomnia

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Second Edition

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1 Introduction

A staggering one third of all humans are affected by insomnia. Sleep-related complaints are also disproportionately high in prevalence in medical practice. This malady, which was once thought to be an innocuous annoyance, is now known to impair normal human function, to cause a variety of medical and psychiatric disorders, and even to limit lifespan. For medical practitioners, therefore, the proper identification, clinical evaluation, and effective management of insomnia are of significant importance.

In this book, we take a systematic approach in informing the primary care practitioner in the evaluation and management of insomnia. In Chapter 2, we begin with a foundation in normal sleep neurophysiology. The past few decades have seen a tremendous advance in our understanding of the central underpinnings of sleep and wakefulness. We now know that this seemingly quiescent state is the product of a complex array of interactions that produce a balance between wake-promoting systems on the one hand, governed by norepinephrine, serotonin, dopamine, acetylcholine, and histamine, and sleep-promoting systems on the other hand, governed by GABA and galanin and under the circadian influence of the hormone melatonin. Newly discovered neurotransmitters, the orexins/hypocretins, play a critical role in maintaining an orderly transition between these two states.

In Chapters 3 through 6, we present the most recent diagnostic guidelines for insomnia. We explore key developments in clarifying the pathophysiology of insomnia, and explain how these have led to an evolution of our view of the relationship between co-occurring insomnia and medical/psychiatric disorders from a model of unidirectional causality to one of autonomous disorders interacting in a bidirectional fashion. We also delve into an in-depth review of the many consequences of this disorder.
In Chapters 7 and 8, we present some of the most important aspects of insomnia for clinical practitioners, ie, its evaluation and management. We stress the importance of a thorough office-based evaluation, and present guidelines for this endeavor based on the most recent practice parameter statements. We emphasize the importance of treatment that is focused on underlying cause, as opposed to the uninformed entry into symptomatic management. In Chapters 9 through 11, we explore the many available pharmacologic agents for the treatment of insomnia and provide an evidence-based approach in their selection and use. Whereas GABA receptor agonists have traditionally dominated the therapeutic armamentarium, we review novel and investigational agents with mechanisms traversing the receptor systems that are involved in the control of sleep and arousal, such as selective histamine H$_1$ receptor antagonists, selective melatonin receptor agonists, and dual orexin receptor antagonists. “Natural” compounds enjoy a significant allure by virtue of their widespread availability and the perception that they are safer than prescription medications for insomnia. We explore the vast array of such products utilized for sleep-related complaints and provide empirical data to guide practitioners through the morass of claims regarding the benefits of these agents. Although less widely utilized than pharmacologic agents, cognitive and behavioral therapies are of clear benefit in insomnia. We explore the principles underlying these techniques and guidelines in their implementation. We also review exciting new evidence demonstrating the lasting benefit of these therapies for extended periods of time following termination of treatment.

Throughout the book, we are guided by our main goal of providing practitioners with clinically relevant, evidence-based, and state-of-the-art information in the evaluation and management of insomnia. We have made concerted effort to ensure that our reviews are consistent with professional guidelines to the extent that current knowledge permits. Nevertheless, we remind our readers that scientific discovery is ongoing. Since the publication of this textbook, certain guidelines and standards for treatment may already have changed. In addition, in clinical practice, medications may be used for indications and at doses that are not covered by the package label. Therefore we advise readers to consult the peer-reviewed literature, as well as product labels, to obtain the most up-to-date information regarding recommended doses, safety profiles, indications, and other guidelines. Useful resources include the FDA website (http://www.access-data.fda.gov/scripts/cder/drugsatfda/index.cfm) and FDA safety alerts at http://www.fda.gov/Safety/Recalls/default.htm.