Book Review: Sleep and Mental Illness

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Sleep and Mental Illness is a book with a unique goal: to show the importance of sleep in mental illness. Sleep restriction and poor sleep quality are endemic in our culture, and behavioral health concerns are widespread as well. A resource that addresses the interplay of these diverse morbidities is welcome and deserves a spot in the libraries of medical specialists of all kinds. The text is divided into three main sections covering basic science, neuroendocrinology, and clinical science. Many chapters are well-written and well substantiated with up-to-date references, although a few are not written to the same standard of quality. In this review, we will highlight some of the strengths as well as some of the weaknesses that we perceived.

In the neuroendocrinology section, chapter 10 discusses endocrine relationships across the reproductive cycle and is particularly well done. The reader is taken through the life cycle of a woman and important topics including biological rhythms, menstrual-cycle related mood symptoms, pregnancy, postpartum mood disorders, and menopause are competently and clearly addressed. Chapter 13 reviews the International Classification of Sleep Disorders and includes a good summary. Chapter 14 provides a nice review of Spielman's "3P" model of insomnia. There are other excellent chapters such as those reviewing the important topics of dementia, Prader-Willi syndrome, traumatic brain injury (TBI), and more. Other positive elements include the thorough discussion of wakefulness-promoting neurotransmitters and the role of hypocretin, although we were left confused as to whether one author considered hypocretin 1 and 2 both to be present in humans.

Weaknesses in a few chapters seem mainly related to overgeneralizations and assumptions based on inadequate data and the use of outdated primary literature, which may be misleading to beginners and frustrating to those already well versed in the topics of mental illness and sleep. Occasionally, assumptions are made that do not necessarily fit the current standard of practice. The basic sciences section aims to cover a large range of sleep topics and several chapters seemed repetitive, containing only slightly different approaches to the same topic. Some of the chapters do not reflect the most current findings. A few specific examples: At least two chapters mention Dement and Kleitman's 1950s classification of sleep, which includes NREM 4 sleep. The 2007 American Academy of Sleep Medicine (AASM) Manual for the Scoring of Sleep and As-

sociated Events has combined the previously separate criteria for NREM 3 and NREM 4 into unified criteria defining a stage N3, thus rendering the earlier classification system obsolete for many. Another chapter makes statements about neurochemistry and pharmacology based on references to literature published in the 1960s and 1970s, such as "monoaminergic activity is responsible for the occurrence of some, if not all, types of depression," which ignores the advances made in understanding the specific roles of serotonin, dopamine and other neurotransmitters in affective disorders.

In the section on neuroendocrinology, chapter 8 explains that normal aging is associated with corresponding decreases in slow wave sleep (SWS) and that elderly subjects commonly exhibit low or absent SWS. However, other chapters place an emphasis on decreased SWS as a correlate of mental illness without the caveat that this also accompanies normal aging without associated psychopathology. The authors of chapter 9, who are based in Australia, discuss metabolic changes in serious mental illness and state that weight gain and obesity are present in schizophrenic patients independent of their medications. In contrast, our experience in the U.S. suggests that untreated schizophrenics are often too disorganized to successfully obtain food or eat and therefore more likely to be thin and malnourished; one wonders if this is the result of cultural differences. Moreover, in the manic phase of bipolar disorder, the patient is often too busy to eat. Major depression by DSM 4 criteria includes changes in appetite, which is often reduced, and consequently weight loss is a common sign of significant depression. References to susceptibility to schizophrenia being conferred by a polymorphism in the promoter region for quinone reductase 2 (QR2) are made in chapter 11, which are at this point are most likely premature. The author was possibly citing Harada's 2003 paper, which suggested that individuals with the deletion of the 29 base pair sequence in the promoter region of the NQO2 gene may confer susceptibility to a certain form of schizophrenia. The study had a small sample size and further study is required to imply a testable genetic link to schizophrenia.

In the clinical science section, the author of chapter 24 rescues previous statements and simplifies sleep in schizophrenia to what it is: an intimate dimension of the clinical picture for which more effort and research attention should be devoted. Chronic psychosis commonly imparts undesirable symptoms

of passivity, apathy, negativism, and isolation, while Steven Bartels (1991) showed that fewer than 50% of schizophrenics exhibited any hostility. Of those who were judged to be hostile, contributing factors included housing instability, paranoid hallucinations or delusions, schizoaffective diagnosis, alcohol use, and bizarre behavior. Despite this, one author in this section states that schizophrenic dreams are most consistent with overt hostility, a formulation that does nothing more than reinforce society's false assumption, often depicted in television melodrama, that schizophrenics are violent. The resultant victimization is perhaps a greater public health concern than perpetration. Teasing out the difference between a dream waking the patient from sleep and a hallucination usually requires significant expertise, and this important distinction was not clearly made.

Also in this section, a difference in practice standards between some authors and current best practice in the United States appeared evident. Some drugs that are mentioned are not available in the U.S.; for example, the sale of nefazodone was discontinued here and in Canada in 2004 by Bristol-Myers Squibb due to rare instances of hepatotoxicity resulting in liver transplant or death, and agomelatine, not yet FDA approved for the U.S. market, is still undergoing Phase III trials by Novartis. Vocabulary is used at times that is part of British parlance and relatively unfamiliar in North American conversation, however this presents an opportunity for expansion of our own cultural competence (and that's "jolly good").

In conclusion, the book *Sleep and Mental Illness* contains some very good chapters and reinforces a key principal that quality sleep is an invaluable asset to the quality of life of those with mental illness. It rightly emphasizes that neuromodulators involved in sleep are also part of current thinking on the pathogenesis of mental illness. Moreover, important sleep issues are addressed in special populations such as Alzheimer patients and those with Prader-Willi syndrome.

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DISCLOSURE STATEMENT

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