Panel Discussion

Changing How We Think About Insomnia

Special Issues Board Panel Members:
Sonia Ancoli-Israel, Ph.D.; Ruth M. Benca, M.D., Ph.D.;
Jack D. Edinger, Ph.D.; Andrew D. Krystal, M.D.; Wallace Mendelson, M.D.;
Harvey Moldofsky, M.D.; Justine Petrie, M.D.; Thomas Roth, Ph.D.;
James K. Walsh, Ph.D.; and John Winkelman, M.D., Ph.D.

Current Insomnia Classification Systems

After presenting a general definition of diagnostic classification and the factors that influence the development of classifications, Edinger discussed past and present insomnia nosologies and the data supporting the reliability, validity, and general utility of these systems. In the subsequent panel discussion, panel members agreed that a successful nosology would include several important characteristics. A valid diagnostic system would be predictive of both pathophysiology and therapeutic approach; in other words, assigning the proper diagnosis to patients and providing the recommended treatment for their insomnia subtype would consistently result in symptomatic amelioration. To enhance reliability and aid research, a successful nosologic system should also provide clear definitions and criteria of diagnostic categories. To address clinical needs, it should define these diagnostic criteria, which point to therapeutic options and long-term morbidity, by fitting the empirical profiles seen in clinical practice. However, sleep medicine currently faces a chicken-and-egg conundrum with regard to nosology development: a main reason to develop a classification system is to direct therapy, but in the absence of reliable therapies for many of the insomnia subtypes, it is difficult to develop an evidence-based nosology.

The panel discussed a number of factors contributing to the present dilemma. First, panel members agreed that, at present, there is no consensus on how to classify or characterize the various clinical presentations of insomnia, nor is there a set of widely accepted treatment guidelines that can be used as a "gold standard." In other words, there are no studies demonstrating the absolute superiority of a particular treatment for any particular diagnostic group. This is a major obstacle to the construction of a classification system.

Second, exacerbating the problem of successful treatment is the heterogeneity of patient populations. The results of different studies cannot be legitimately grouped to contribute to clinical consensus building because the insomnia disorders under investigation are not consistently defined. Another contributing factor is the lack of diagnostic specificity of currently used insomnia classification systems (such as that in the DSM-IV[1]). The "necessary and sufficient" symptoms for a diagnosis must be identified and confirmed (as has been done for DSM psychiatric diagnoses). A more disciplined set of criteria is an important part of this process.

Third, clarification of the pathophysiology and the impact of comorbid conditions in sleep disturbance is also important to the development of an insomnia nosology. The panel agreed that, ideally, recognized distinctive pathophysiologies should guide the organization of nosologic categories and that nosology predicts pathophysiology in a reciprocal relationship. However, our current lack of understanding of the pathophysiological bases of distinctive insomnia phenotypes is a barrier to realizing this goal; the symptomatic profile for individual patients is often not "clean" due to extrinsic factors such as conditioning, and the relationship between the insomnia complaint and its underlying pathology may be unclear or multicausal. Furthermore, from a treatment standpoint, there has been debate about the distinction between insomnia as a primary disorder and insomnia as a symptom secondary to another condition, such as a mood disorder or restless legs syndrome.

A better understanding of basic mechanisms elucidating the biological differences, if any, between insomnias associated with other illnesses such as mood disorders or chronic pain conditions will further contribute to the organization of diagnostic categories based on etiology. Unfortunately, advances made in neurophysiological studies in insomnia have been slower than those made in other fields. This is one manifestation of the chicken-and-egg problem confronting the construction of a useful insomnia nosology: basic research is fundamental to developing a classification system, but without a classification system, consistent research cannot be performed.

Thus, the panel concluded that there are a number of limitations to the current classification systems and that these barriers must be overcome in order to improve on the existing nosologies.

Insomnia Treatment Efficacy

Roth traced the development of measures of insomnia symptoms from early patient reports to polysomnography. Although these measures have historically been used to assess treatment efficacy, there is little evidence that any of them reflect improvement in insomnia-related morbidity. In the subsequent panel discussion, panel members agreed that insomnia is clinically important either as a cause or as an indicator of consequences related to insomnia, such as next-day functioning, pain, and depression. They emphasized, however, that subjective measures such as estimated time to fall asleep, estimated total sleep time, and sleep quality remain important, as they reflect patients' perceptions about their sleep, and therefore there is a need for multiple efficacy measures when assessing anti-insomnia agents. Endpoints for determining the efficacy of sleep therapy vary depending on the focus of the therapy. For symptomatic management, patients' reports of sleep onset, sleep maintenance, and sleep quality are of prime importance. Endpoints that measure the efficacy of anti-insomnia agents in reducing or preventing morbidity are as yet not well defined. However, it was agreed that in the future both sleep and nonsleep endpoints (whether subjective or objective) need to be evaluated regarding their utility in determining efficacy of medications.

Managing Chronic Insomnia

Krystal discussed the importance of recognizing chronic sleep difficulty as a clinical entity distinct from the more common transient manifestation of insomnia and the challenges associated with long-term treatment. Krystal also presented data suggestive of a changing perspective on chronic insomnia management. In the subsequent panel discussion, panel members agreed that insomnia is not a homogeneous condition and that use of medications should be individualized by diagnosis. There was consensus that not all patients with chronic insomnia need to be treated chronically and that behavioral interventions are useful in treating chronic insomnia. There was general agreement that there is clearly a role for long-term medical therapy, but there was also a call for increased research. Such research should include general outcomes research, such as on the impact of early intervention for insomnia and insomnia's effects on psychiatric illness outcomes, and longer-term medication and safety and efficacy studies, which will add to findings from recently conducted longer-term studies. This will help to clarify indications and contraindications for longer-term medication prescription and to facilitate the development of clear guidelines regarding longer-term medication usage.

Special Populations

Benca and colleagues addressed the concerns associated with special populations for whom insomnia is often chronic and severe and thus more difficult to treat, including patients with depression, patients with chronic pain or fatigue conditions, and the elderly.

Insomnia in depression. The panel agreed that sleep disturbance is correlated with depression and that insomnia predicts depressive onset or relapse. These observations suggest that there may be a causal relationship between sleep disturbance and depression. A number of outstanding issues were noted by the panel regarding the perceived "special relationship" between insomnia and depression. For instance, the correlation between fatigue and insomnia, both in the presence and absence of depression, remains to be characterized. Furthermore, clarifying whether there is a qualitative or a quantitative difference between primary insomnia and insomnia associated with depression is an important direction for future investigation.

If such a difference exists—in other words, if there are multiple insomnia syndromes (as opposed to a single syndrome in which some sufferers also develop depression)—implications for treatment will impact guidelines for management of psychiatric patients, for instance, by determining whether a sedating antidepressant is preferable to an arousing antidepressant plus a hypnotic. The panel agreed that the role of chronic treatment also must be elucidated, in light of current U.S. Food and Drug Administration recommendations that treatment with benzodiazepines or nonbenzodiazepine hypnotics be limited to 1 month or less. Another unanswered treatment question is whether treating depressive symptoms alone is adequate for management of insomnia. The converse question is equally important: will treatment of sleep disturbance prevent the onset of depression?

Insomnia in conditions of chronic pain and fatigue. The panel members agreed that the study of nonrestorative or unrefreshing sleep is challenged by the relative difficulty in assessing qualitative measures such as how a patient feels the next day following poor sleep; quantitative measures, on the other hand, are easier to collect and assess, which may explain why there are more studies investigating the characteristics of sleep initiation and sleep maintenance problems. Nevertheless, there was panel consensus that subjective dissatisfaction with sleep is a clinical reality. Patients who get "enough" sleep by objective standards may still complain that their sleep was "light" and that they do not feel refreshed the next day. Often, however, the patients themselves are unable to describe in more specific terms the qualities of "light" sleep and its effects: they may note a feeling of "tiredness" and physical and mental exhaustion, nonspecific aches and pains, hypersensitivity to touch and other stimuli, and general dysphoria. All of these symptoms are also associated with chronic pain and fatigue syndromes such as fibromyalgia.

Insomnia in the elderly. In the discussion of the relationship between aging and insomnia, the panel noted that the consequences of sleep deprivation in the elderly (e.g., impairment in alertness, memory, and performance) mirror

the consequences of insomnia in younger adults. This observation suggests that older individuals do not necessarily require less sleep than younger adults and do experience many of the same adverse outcomes from getting less sleep that younger adults experience. However, elderly insomniacs do not appear to evince the hyperarousal that characterizes insomnia in some younger adults. One possible ramification for treatment is that the set of therapeutic endpoints used for elderly patients should be different from that used for younger patients. Thus, the causes and the manifestations of sleep disturbance in the elderly must be teased apart in order to better understand and treat insomnia in the aging population.

Conclusions

Sleep research has seen a number of advances in recent years, and emerging clinical evidence has both allowed for a reevaluation of existing perspectives and provided support for new perspectives on how to address the clinical challenges attending the study and treatment of insomnia. However, there is still work to be done; despite the high prevalence and the heavy personal and societal toll it exacts, insomnia remains an underdiagnosed and undertreated condition. Further research is needed to answer remaining questions, such as how to best classify the various clinical presentations of insomnia, the role of early treatment of insomnia and its impact on morbidity, the relationship of insomnia to psychiatric and somatic illnesses and its optimal treatment in those contexts, and the safety of longer-term pharmacotherapy for chronic sleep disturbances.

REFERENCE

1. Ohayon MM, Roberts RE. Comparability of sleep disorders diagnoses using DSM-IV and ICSD classifications with adolescents. Sleep 2001;24:920–925