EDITORIAL

Nocturnal Dissociation – Awake? Asleep? Both? or Neither?

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INTRODUCTION

The article in this issue of Sleep and Hypnosis entitled "Characteristics of Patients with Nocturnal Dissociative Disorders" by Agargun et al. (1) underscores the fact that careful study of unusual nocturnal behaviors will greatly expand our understanding of complex behaviors arising from the sleep period. In this series of 29 patients with dissociative disorders (DD), over one-fourth were found to have nocturnal dissociative episodes (NDEs), often with dangerous or injurious implications to the patient or others. These NDEs can perfectly masquerade as other parasomnias, such as nocturnal seizures, disorders of arousal, or malingering. The correct diagnosis in a given case has obvious therapeutic and forensic implications.

There are several points to emphasize. First, this report calls attention to the emerging field of research on exploring the nocturnal, sleep-related dissociative components of DD, which has predominantly, if not overwhelmingly, been considered a disorder almost exclusively of wakefulness. Prevalence rates of NDEs in DD should be determined in carefully designed, prospective studies using structured evaluation instruments, and extensive video-polysomnographic monitoring. There are probably important therapeutic implications (both psychotherapeutic and pharmacologic) with this prevalence research. Some NDE may not exactly mirror the daytime dissociative behaviors, presumably changed due to state-dependent changes in neural functioning. Therefore, not only the prevalence needs to be explored, but also the phenomenology of nocturnal dissociation viz-a-viz daytime, wakeful dissociation.

Second, this is another example of a sleep-period expression of a diurnal behavioral abnormality - the best-known being the sleep-related eating disorder. We now know that patients with daytime eating disorders are more vulnerable to having nocturnal sleep-related eating disorders (2). In that study, hospitalized patients with waking eating disorders (bulimia nervosa, anorexia nervosa) had a 17% prevalence of nocturnal sleep-related eating disorder, vs. 9% in out-patient eating disorder patients, vs. 4.6% in a student sample. The patient population base is clearly important: most patients with nocturnal eating disorders presenting to a multi-disciplinary sleep disorders center do not have a daytime eating disorder (3). Therefore, the research on daytime eating disorders and daytime dissociative disorders would indicate the important need to conduct careful research on any nocturnal, sleep-related components of these disorders (for both practical/clinical considerations, and for neuroscientific understanding of sleep-related brain mechanisms in psychiatric and sleep disorders). Even "negative studies" are important, as we now know from careful research that contrary to subjective patient reports, there are no specific objective nocturnal, sleep-related disorders associated with posttraumatic

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stress disorder (PTSD): PTSD has specific daytime symptoms, but is not a specific sleep disorder (4) .

Third, studies such as this should be incentive to evaluate sleep complaints in a large number of different psychiatric conditions and psychiatric symptoms in patients with sleep complaints.

Inasmuch as NDEs may be a manifestation of state dissociation, further study of such events will contribute to our understanding of phenomena resulting from admixed states of wake and sleep. There is growing evidence that the spectrum of wake/sleep state dissociation is very broad, indeed. The best understood examples are narcolepsy (with cataplexy representing the intrusion of one element of REM sleep (atonia) into wakefulness), disorders of arousal (admixture of wakefulness and NREM sleep), and REM sleep behavior disorder (waking muscle tone intruding into REM sleep). The spectrum of clinical state dissociation has been thoroughly discussed elsewhere (5,6).

The concept of state dissociation is elegantly discussed in "The Dream Drugstore" by J. Allan Hobson (7) and in "Dreaming and the brain: towards a cognitive neuroscience of conscious states" by Hobson and his team (8). His concept of state space as defined by Activation, Input, and Mode (AIM state space) explains the continuity and diversity of mental states. The normal boundaries of state experience are fully declared wakefulness, NREM sleep, and REM sleep. However, any and all combinations of state-determining variables are theoretically possible, and would explain many altered states of consciousness, particularly those induced by drugs or underlying psychopathology. The AIM state space concept links dreaming, psychosis, and psychedelic experience. Growing evidence that neural plasticity (as in alteration of brain function following traumatic events) is far greater than previously appreciated would readily explain NDEs as mental states outside conventional boundaries - at the borders of sleep and wakefulness.

Hobson's concept of dissociation is complemented by Edelman and Tononi's formulaton of the relationship between normal consciousness and psychogenic dissociative states. They propose that waking psychogenic dissociation represents a functional disconnection (or loss of integration) among various brain regions (9). It requires little extrapolation to apply this notion to NDEs.

The fields of psychology, psychiatry, sleep medicine, and basic neuroscience can be enhanced by this type of research using appropriate clinical tools, along with the objective monitoring of sleep – leading to better understanding, with important therapeutic implications.

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