

Forensic Evaluation of Sexsomnia

Brian J. Holoyda, MD, MPH, MBA, Renée M. Sorrentino, MD, Amir Mohebbi, MD, Antonio T. Fernando, MD, and Susan Hatters Friedman, MD

Sexsomnia is a non-rapid eye movement parasomnic behavior characterized by sexual activity during sleep. Recognized in the most recent editions of the Diagnostic and Statistical Manual of Mental Disorders and the International Classification of Sleep Disorders, sexsomnia is likely to arise with increasing frequency in court as a potential explanation for sexual offending. The forensic psychiatrist has a unique role in the evaluation and management of sexsomnia. The psychosexual evaluation may elucidate the presence or absence of paraphilias and paraphilic disorders and identify any overlap between the alleged sexsomic behavior and paraphilic interest. In addition, forensic psychiatrists may assess for malingered sexsomnia, provide an opinion regarding criminal responsibility, or evaluate the risk for committing future sexual offenses. Forensic psychiatrists should therefore understand basic information regarding the disorder, as well as how to conduct a psychosexual evaluation effectively in cases of alleged sexsomnia. This article describes the various considerations involved in the forensic evaluation of sexsomnia.

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With its introduction to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5),¹ and the third edition of the International Classification of Sleep Disorders (ICSD-3),² sexsomnia is increasingly likely to arise in court regarding nocturnal sexual offenses. It is important that psychiatrists involved in the assessment of individuals reporting sleep-related sexual behavior be knowledgeable regarding its evaluation and diagnosis. In addition, there are relevant forensic questions that arise in sexsomnia cases, including the overlap of paraphilic interests with sleep-related sexual behavior, the assessment of malingering, and the

appropriate management of individuals found not criminally responsible. Though there have been numerous reviews of case law pertaining to sexsomnia, there has been comparatively little effort to guide forensic evaluators through the practical and theoretical problems it poses. This article is a guide for forensic psychiatrists to understand basic information about sexsomnia, the role of the psychiatrist in the evaluation of defendants reporting sexsomnia, and the forensic questions that may arise.

Overview of Sexsomnia

The ICSD-3 identifies seven major categories of sleep disorders, including insomnias, circadian rhythm disorders, central disorders of hypersomnolence, sleep-related movement and breathing disorders, parasomnias, and other sleep disorders. Parasomnias form a vast group of sleep disorders in which patients experience undesirable events and sleep-related behaviors before, during, or immediately after sleep.² Parasomnic behaviors include sleepwalking, sleep talking, sleep terrors, nightmares, sleep eating, and sleep enuresis. Often thought of as benign and peculiar sleep experiences of children, parasomnias in adults can result in significant consequences.³ Confusional arousals or disturbing nightmares can result in sleep disruption and problematic daytime fatigue and

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Dr. Holoyda is Forensic Psychiatrist, Martinez Detention Facility, Martinez, CA, and Psychiatrist, Full Spectrum Health Services, Las Vegas, NV. Dr. Sorrentino is Director, Institute of Sexual Wellness, Weymouth, MA, and Assistant Professor, Harvard School of Medicine, Boston, MA. Dr. Mohebbi is Psychiatrist, Mission Viejo, CA. Dr. Fernando is Senior Lecturer, Department of Psychological Medicine, University of Auckland, Auckland, New Zealand. Dr. Friedman is the Phillip J. Resnick Professor of Forensic Psychiatry, Case Western Reserve University, Department of Psychiatry, Cleveland, OH. Address correspondence to: Brian Holoyda, MD, MPH, MBA. E-mail: holoyda@gmail.com.

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sleepiness. Some parasomnias may cause serious injuries, such as in the case of sleepwalking through glass doors or unintentional violence toward a bed partner.

Sexsomnia is a specific parasomnic behavior recognized in the DSM-5 and the ICSD-3. DSM-5 lists sexsomnia under the diagnosis “non-rapid eye movement [NREM] sleep arousal disorders” (Ref. 1, p 399) and notes that it may also be called “sleep-related sexual behavior.” The ICSD-3 indicates that “sleep-related abnormal sexual behaviors” (Ref. 2, p 232) may represent a subtype of confusional arousal or sleepwalking, which themselves are disorders of arousal within the category of NREM-related parasomnias. Fedoroff and colleagues first described parasomnic sexual behavior in a 1997 case series assessing the motivation of men who sexually assaulted sleeping victims.⁴ Shapiro and colleagues subsequently coined the term “sexsomnia” in 2003 in a case series of 11 individuals who engaged in sexual behaviors while asleep.⁵ Sleep-related sexual behavior is increasingly recognized as more common than initially presumed. In a population-based, cross-sectional study of 1,000 adults (51% women) in Norway, the lifetime prevalence of sexual acts while asleep was 7.4 percent. Comparatively, 22.4 percent had a lifetime prevalence of sleepwalking, 66.8 percent of sleep talking, 10.4 percent of sleep terrors, and 4.5 percent of sleep-related eating.⁶

Characteristics of Sexsomnia

Sleep-related sexual behaviors are as varied as sexual behaviors that occur while awake. Sexual acts performed while asleep include masturbation, spontaneous orgasms, sexual vocalizations, oral sex, anal sex, fondling another person, attempted intercourse, and completed sexual intercourse.⁷ In one study of sexsomic behaviors, 75 percent of the individuals who engaged in sexual activity while asleep were men. The most common behaviors included sexual intercourse and fondling.⁸ The most common diagnosis for individuals engaged in sexsomic behaviors was disorder of arousal (86%), and the second most common was obstructive sleep apnea (14.3%). About a quarter of the cases resulted in legal consequences. In a recent review of 351 forensic referrals to a sleep center, 41 percent ($n = 145$) were referred due to sexual assault allegations. Of the initial 351 referrals, 31 percent ($n = 110$) were believed to be possibly sleep-related and were accepted for the purpose of a forensic sleep evaluation.⁹ Reasons for

rejection included behavior better explained by another medical or psychiatric condition and concomitant alcohol intoxication or illicit drug use. Of the 110 cases accepted for investigation, 52 related to sexual assault allegations. Sexsomnia was the most common diagnosis, representing 46 of 110 cases, with other diagnoses including disorders of arousal ($n = 22$), pharmaceutical toxicity with zolpidem or zaleplon ($n = 18$), and sleep deprivation ($n = 7$). Notably, the authors did not diagnose malingering in any of the 110 referrals.

Triggers for sexsomic episodes, like other NREM parasomnias, include alcohol, recreational drug use, sleep deprivation, fatigue, circadian rhythm disruption (e.g., from airplane travel across time zones), psychotropic medications, and other sleep disorders like obstructive sleep apnea, bruxism, periodic limb movements, and restless leg syndrome.¹⁰⁻¹² The majority of patients have a history of current or prior sleepwalking, sleep talking, or sleep terrors; studies have demonstrated that 11.1 to 35.3 percent of patients with sexsomnia may have no evidence of prior or current nonsexual parasomnic behavior.^{13,14} Most sexsomic events occur during the first third of the night. Partners note that patients, when engaged in sexsomnia, are more direct, aggressive, less inhibited, less focused on the partner, and sometimes display sexual behavior that is atypical for the individual.¹³ The episodes are usually brief, lasting less than 30 minutes, and are initiated abruptly.⁷ Most sexsomnia patients do not have any recall of the sexual episodes; in one study, 96 percent of patients reported complete amnesia for the episode.⁸ A minority of patients have reported patchy or full recall of sexsomnia, especially if the partner reciprocated the sleeper’s sexual engagement.¹³ Patients do not often attempt to conceal their actions and are typically upset when they become aware of them.⁷

Diagnosing Sexsomnia

The DSM-5 criteria for sexsomnia and the ICSD-3 criteria for disorders of arousal are summarized in Table 1.^{1,2} The diagnosis of sexsomnia requires a thorough clinical history, sleep history, and collateral history. In addition, an overnight sleep study with full electroencephalogram (EEG) and video monitoring should be obtained in an effort to capture nocturnal sexual behaviors. The clinical history should assess an individual’s stress and fatigue levels, psychiatric comorbidities, medications, neurologic history,

Table 1 Summary of Criteria for Sexsomnia*

DSM-5 criteria for NREM sleep arousal disorders and sexsomnia subtype of sleepwalking

- Criterion A. Recurrent episodes of incomplete awakening from sleep, usually occurring during the first third of the major sleep episode, accompanied by sleepwalking.
- Criterion B. No or little dream imagery is recalled.
- Criterion C. Amnesia for the episodes is present.
- Criterion D. Clinically significant distress or impairment.
- Criterion E. Disturbance is not attributable to the effects of a substance.
- Criterion F. Coexisting mental or medical conditions do not explain the episodes.

Diagnosed as “NREM sleep arousal disorders, sleepwalking type, with sleep-related sexual behavior (sexsomnia)”

ICSD-3 criteria for disorders of arousal, including sleepwalking and confusional arousal subtypes

- Criterion A. Recurrent episodes of incomplete awakening from sleep.
- Criterion B. Inappropriate or absent responsiveness to efforts of others to intervene or redirect the person during the episode.
- Criterion C. Limited or no associated cognition or dream imagery.
- Criterion D. Partial or complete amnesia for the episode.
- Criterion E. Another sleep disorder, mental disorder, medical condition, medication, or substance use does not better explain the disturbance.

Confusional arousals:

- Criterion A. General NREM disorders of arousal criteria (above) are met.
- Criterion B. The episodes are characterized by mental confusion or confused behavior that occurs while the patient is in bed.
- Criterion C. There is an absence of terror or ambulation outside of the bed.

Sleepwalking:

- Criterion A. General NREM disorders of arousal criteria (above) are met.
- Criterion B. The arousals are associated with ambulation and other complex behaviors out of bed.

* Adapted from References 1 and 2.
 NREM = non-rapid eye movement

family history of sleep disorders, alcohol and illicit drug use, and history of violence. A detailed sleep history should screen for past and current sleep pathologies, including sleepwalking, sleep talking, sleep terrors, nightmares, other parasomnias, obstructive sleep apnea, periodic limb movements, restless leg syndrome, and nocturnal enuresis. An evaluator should ask about shift work and the degree of sleep deprivation during the episodes of sexsomnia. In addition, one should ask the evaluatee about environmental factors that disrupt sleep, including ambient noise, sleeping partner noise, and sleeping partner movements.¹⁵ As most people with sexsomnia have poor recall of the events, asking about recollection of the episode or assessing the degree of amnesia of the event is important. Obtaining collateral history from bed partners, victims, or family members who are aware of a childhood history of sleep abnormalities or have witnessed episodes of sexsomnia, parasomnic behaviors, or sleep-disordered breathing may also help support or refute a diagnosis.⁷

Video polysomnography, or the “sleep study,” may assist in diagnosing NREM parasomnias, including sexsomnia. In a recent descriptive study of patients complaining of NREM parasomnias, individuals reporting sexsomnia and those reporting other parasomnias both displayed an abnormally high number of awakenings from the N3 (or slow-wave) stage of

sleep. Most patients with sexsomnia in this particular study did not show sexual behaviors during the study, however.¹³ In fact, there are very few published cases of actual sexsomnia observed during sleep studies.¹⁶ In general, NREM parasomnic behaviors are rarely captured in sleep laboratories.¹⁴ Sleep studies of parasomnias, including sexsomnia, are similar to the EEG study of seizure disorders, in that the diagnostic test may or may not identify the pathology in question.¹⁷ Failure to capture behaviors consistent with sexsomnia on a sleep study does not exclude the possibility that sexsomnia occurred during the alleged event. Conversely, capturing sexsomnia during a sleep study may be useful diagnostically but does not automatically allow the examiner to state that the alleged crime occurred as a result of sexsomnia. Despite these problems, some researchers have recommended the routine use of video polysomnography in cases of suspected NREM parasomnia due to their potential diagnostic yield and the identification of additional underlying sleep pathologies.¹² Repeating sleep studies in the hope of capturing sexsomnia, however, may be impractical and of limited utility.

Treating Sexsomnia

Treatment of sexsomnia usually involves sleep hygiene, stress management, avoidance of alcohol and

other drugs, and optimizing the sleep environment. Patient education about sexsomnia and the risk it poses to potential sleeping partners is vital. Mitigation strategies to reduce the risk of harm to sleeping partners include sleeping in separate beds or rooms and locking bedroom doors. If a patient is referred for treatment related to an event that resulted in criminal charges, all parties involved should receive adequate psychological support, including psychotherapy, if indicated. Clonazepam is the medication treatment of choice for non-REM parasomnias, including sexsomnia.¹⁸ Sleep apnea, an identified trigger for sexsomnia in 14 percent of cases, and other modifiable sleep pathologies should also be treated.⁸

Sexsomnia in Court

Because sexsomnia may cause an individual to engage in unwanted sexual contact with others, sexsomnia can lead to charges for sexual offenses. Indeed, multiple case series have demonstrated the legal consequences of sleep-related sexual behavior. In 2014, Ingravallo and colleagues¹⁹ published the first systematic review of medico-legal cases involving sleep-related violence and sexual behavior in sleep. Reviewing cases from 1980 to 2012, the authors identified nine legal cases related to sexsomnia. In all cases, the defendant was an adult man and the victims were adult women or juvenile girls. The cases described a broad range of sexual behaviors, including a man drinking a beer while naked in a major thoroughfare, a man struggling with a woman in a communal bathroom and touching her breast, and numerous adult men engaging in sexual activity with minors. Six of the cases involved penetrative sexual behaviors involving the defendant's fingers or penis. In each of these cases a forensic evaluation and expert evidence were provided to the court. The forensic evaluations included various components, including general medical, psychiatric, and neurologic evaluations; EEG; magnetic resonance imaging; and video-polysomnography. Diagnoses varied, but most defendants received diagnoses of sleepwalking or NREM parasomnia. In the case of the man who touched a woman's breast, the defendant received a diagnosis of nocturnal complex partial seizure. The defendant was acquitted in all eight cases in which the verdict was known.

Organ and Fedoroff²⁰ published a similar analysis of 10 sexsomnia cases from Canada. Cases were dated from 1994 to 2013. Similar to the review by

Ingravallo and colleagues,¹⁹ all defendants were men and all victims were women or young girls. Four defendants had a prior known history of parasomnic behavior. Only five individuals were acquitted in the cases discussed by Organ and Fedoroff, whereas four were found guilty due to "lack of supporting evidence" (Ref. 20, p 34). One defendant was found not criminally responsible by reason of a mental disorder. In this case, the individual ultimately received an absolute discharge from the psychiatric hospital after being committed.

Finally, in 2018 Mohebbi and colleagues²¹ published a review of U.S. cases from 2004 to 2012 in which sexsomnia was utilized as a defense by individuals accused of repeated sex crimes. In all eight cases, the defendants were men; in seven cases, the victims were minor-aged girls. Despite presenting expert testimony by a variety of professionals, including physician sleep experts and psychologists, seven of the eight defendants were found guilty. Mohebbi and colleagues noted the limited utility of polysomnography to verify the presence of a NREM parasomnia in defendants and emphasized the importance of evaluating individuals for potential malingering. Their case review suggests that individuals with repeated sexual offenses attributed to sexsomnia may more likely be found criminally responsible for their acts.

Forensic Evaluation of Alleged Sexsomnia

Expertise in sleep medicine is necessary when a defendant reporting sexsomnia completes a sleep evaluation that may potentially include an overnight sleep study. There are many reasons, however, why a forensic psychiatrist may be a necessary component of the evaluation. Forensic psychiatrists can perform a general psychiatric and focused psychosexual evaluation to identify the presence of psychopathology and to assess an individual's history of violence and problematic sexual behaviors. Though there are no specific techniques or instruments designed to assess malingered sexsomnia or other sleep difficulties, the forensic psychiatrist may detect malingered sexsomnia or identify other malingered psychopathology, which may contribute to the overall evaluation. Finally, a forensic psychiatrist can assist in formulating a risk-management plan for individuals found not criminally responsible on the basis of sexsomnia. Practical and theoretical considerations relating to each of these topics are elaborated below.

The Psychosexual Evaluation of Sexsomnia

To understand the sexual behavior reported to arise from sleep, the forensic psychiatrist should conduct a psychosexual evaluation. The goal of the psychosexual evaluation is to determine whether a paraphilic disorder exists and whether other risk factors for sexual offending are present. The psychosexual evaluation consists of a clinical interview and, if necessary, objective testing. The clinical interview includes a detailed sexual history, with inquiry about childhood exposure to sexual acts, sexual partners, and sexual functioning such as masturbation pattern; a complete review of systems for each of the paraphilic disorders; and a detailed discussion of any past problematic sexual behavior or sexual offending. Given the social stigma and possible legal implications, individuals with paraphilic interests may be unwilling to disclose their sexual interests. It is therefore important to obtain, when possible, collateral information from previous sexual partners and bed partners to confirm an individual's report of sexual interests and behaviors, including those performed during sleep.

Paraphilias should be considered in the differential diagnosis of the reported sexual behavior. The index of suspicion for a specific paraphilia relates, in part, to the reported sexual behavior during sleep. For example, a sleeping individual who engages in sexual behaviors with a prepubescent individual raises concern for both pedophilic disorder and sexsomnia. Similarly, the presence of exhibitionistic disorder should be considered in cases in which the sleeping individual is reported to have exposed his genitals to an unsuspecting individual. In such cases, objective testing to determine sexual interests may be appropriate. Objective tests include sexual history polygraphs, the Abel screen (associating visual reaction time with sexual interest), and the penile plethysmograph (measuring penile tumescence to sexual stimuli).²²⁻²⁴

Sexsomnia has traditionally been thought to arise from a primary sleep disorder, rather than a paraphilic disorder or other underlying sexual disorder. This conceptualization has led to clinical interviews and treatment focused on sleep. The question of whether the behaviors of people with sexsomnia are truly automatic and involuntary, or represent reduced inhibition in the setting of paraphilic or opportunistic sexual interests remains unanswered.²⁵ Shapiro and colleagues⁵, in the only study to investigate paraphilic interests in sexsomnia cases, reported

a high incidence of paraphilic behavioral patterns in their clinical case series of 11 patients. The authors suggested that this high incidence may not be a consistent trait of sexsomnia but reflects the referral bias of the cases. They postulated that nonparaphilic sexsomnia is less likely to be seen in a clinical setting.

It is important for a forensic evaluator to weigh the evidence that an individual's alleged sexual behavior is related to a paraphilia or paraphilic disorder, as opposed to sexsomnia, because an individual may engage in conscious paraphilic behavior and attempt to utilize the diagnosis of sexsomnia as an excuse. For example, an expert should have a high index of suspicion if evaluating a man with a known history of pedophilic acts reporting sexsomnia as a defense for repeated sexual acts with prepubescent children. On the other hand, an individual may theoretically have sexsomnia and an unrelated paraphilia or paraphilic disorder. For example, sexsomnia could be more plausible in someone with a history of sexual masochistic disorder and a known history of sleepwalking who walks outside and urinates in the yard in view of others, as this sleep sexual behavior is not related to sexual masochistic interests.

The relationship between sexsomnia and other aspects of human sexuality remains unclear, as well.²⁵ It is unknown whether individuals' sleep-related sexual behaviors reflect their sexual orientation. It is also unknown if the risk posed by adults²⁵ and children²⁶ with genuine sexsomnia is similar to that posed by rapists, child molesters, juvenile sexual offenders, and other sexual offenders. Presumably, with proper treatment and risk modification, the recidivism risk for people with sexsomnia would be significantly reduced for acts related to the sexsomnia. The paucity of studies examining the prevalence of paraphilic disorders in cases of sexsomnia or studies applying sexual offender risk-assessment tools in sexsomnia makes it difficult to conceptualize whether paraphilias and sexual offending risk assessments relate to sexsomnia. Certainly, answers to these questions have important clinical and forensic implications. Studies examining the recidivism of individuals with sexsomnia over long-term follow-up and those applying empirically derived sex offender risk-assessment tools to individuals with sexsomnia may provide a better understanding of the relationship between sexual offending and sleep-related sexual behavior. The practical and theoretical challenges of conducting a psychosexual evaluation of an individual reporting

sexsomnia are highlighted in the following amalgamated case.

Mr. J is a 54-year-old married man with no past psychiatric history and a past medical history significant for sleep apnea, chronic obstructive pulmonary disease, and obesity who was charged with indecent assault and battery on a child. It was alleged that Mr. J sexually assaulted his 6-year-old stepdaughter by rubbing his penis on her buttocks while she was asleep. Mr. J denied the charge. He stated that he fell asleep on the couch with his stepdaughter as they were watching television. He remembered waking up in the middle of the night to take a shower, putting on his pajamas, and then going to sleep in his bedroom. The alleged victim reported the incident to her mother the following morning.

Mr. J was referred for a forensic psychiatric evaluation. Upon interview, he reported a history of sleepwalking. He said that, since childhood, he had experienced episodes in which he woke up in a different room in the house. His wife confirmed that he had previously sleepwalked and sleep talked. She was so bothered by his sleep talking that she recorded him a few nights on her phone's camera. The recordings showed Mr. J restless in the bed with audible but inarticulate speech. His wife was unable to comment on the frequency of his sleep talking as the two no longer slept together due to his behavior.

Upon inquiry, Mr. J's sexual history was significant for heterosexual interest with no paraphilic interests. Given the nature of the alleged offense occurring against a child, Mr. J was referred for penile plethysmography. Mr. J's testing indicated primary sexual arousal to adults but also arousal to prepubescent girls. When questioned about the results, Mr. J denied sexual interest in children.

A sleep medicine expert also evaluated Mr. J. He underwent video polysomnography, which was normal. The sleep expert concluded that Mr. J had both sleepwalking and sleep talking disorders but did not have a history consistent with sexsomnia. Mr. J subsequently accepted a plea bargain and was sentenced for the offense.

The case of Mr. J presents practical and diagnostic challenges. He has risk factors for sexsomnia including a history of sleep apnea, sleepwalking, and sleep talking; however, he lacks a history of sexual behavior while sleeping. Objective testing further confuses matters: his negative video polysomnography does not exclude the possibility of sexsomnia, and his

positive penile response to prepubescent children on penile plethysmography does not mean that he committed the alleged offense. Furthermore, he has no known prior sexual offenses against children. This case also raises the currently theoretical question of whether acts committed during alleged episodes of sexsomnia are related to underlying paraphilic interests.

Malingering

Individuals accused of sexual offenses may have a strong incentive to feign a mental health disorder to avoid criminal prosecution. Given that the inappropriate sexual behavior often provides both the motivation and the end goal for offenders, there are few conditions that can sufficiently alter one's *mens rea* to reduce or exculpate criminal responsibility for a sex offense. The introduction of sexsomnia in DSM-5 may result in more frequent referrals for sexsomnia evaluations because the presence of a sexsomnia has the potential to help absolve an individual for any sexual behavior alleged to occur while asleep.

There are no objective malingering tests for sexsomnia. Rather, the forensic expert should rely on history and collateral information to identify inconsistencies in the defendant's narrative. There may be specific elements of an individual's history that suggest that an individual is feigning sexsomnia. These are summarized in Table 2. Any efforts to obfuscate one's sexual activities demonstrates knowledge of one's behaviors and probable malingered sexsomnia. Examples include wearing a condom; changing, cleaning, or throwing away soiled clothes; returning to a primary sleeping partner's bed in a quiet or otherwise suspicious manner; or threatening a victim to remain silent about the incident. A history of recurrent, similar sex acts while asleep even after becoming aware of one's sleep-related sexual behavior is also a potential clue to malingered sexsomnia. Most individuals would be concerned to learn that they had engaged in nonconsensual sex with a partner or a child while asleep. In such a situation, one would expect an individual to seek medical attention or engage in commonsense risk-mitigation strategies, like changing beds or rooms or locking doors. The lack of any effort to reduce the risk of recurrence after learning of one's sleep-related sexual behavior demonstrates either a disregard for one's involuntary violent behavior or potentially malingered sexsomnia.

Table 2 Potential Clues to Feigned Sexsomnia

Element	Explanation
Efforts to conceal behavior	Efforts to conceal sexual acts allegedly committed while asleep demonstrates a knowledge of the acts.
Repeated episodes of sexual abuse perpetrated after being aware of the behavior	An individual genuinely concerned about the effect of his sleep-related sexual behavior would be more likely to try to reduce the risk of recurrence.
Recollection of the episode	Sexsomnia occurs during slow-wave sleep, a time when an individual is typically not conscious. Research demonstrates that full or patchy recall of alleged events occurs in a minority of cases.
New-onset sexsomnia presenting as sole parasomnic behavior	One tenth to one third of patients presenting with sexsomnia in research studies have no history of current or prior nonsexual parasomnic behavior. New-onset sexsomnia with no history of other parasomnic behaviors in an individual charged with a sex offense may raise an evaluator's suspicion.

There are other elements of the clinical history that may suggest possible malingered sexsomnia. In studies of forensic and nonforensic samples, full recall of the alleged sexual activity is uncommon.^{8,13} A malingering defendant may openly report recollections of the alleged episode. For defendants reporting no memory of the alleged offense, the use of misleading questions containing false information about the event may elicit a response demonstrating an accurate recollection. Notably, individuals who experience confusional arousals may also recall the events in question and those with genuine parasomnias may confabulate to explain their behaviors, so the forensic expert should be careful when considering recall as evidence of potential malingering. Finally, alleged new-onset sleep-related sexual behavior in the absence of any history of other parasomnic behaviors may raise concern for malingering. As described above, research demonstrates that one tenth to one third of individuals with sexsomnia have no evidence of current or prior nonsexual parasomnic behavior.^{13,14} Forensic evaluators should interview prior bed partners, roommates, or family members to determine if there is evidence of a previously undiagnosed parasomnic disorder.

There are no objective tests designed to assess for feigned parasomnias, including feigned sexsomnia. Should the evaluator have concerns about a disingenuous presentation by an evaluatee, the evaluator may consider conducting a Minnesota Multiphasic Inventory-2 to evaluate the validity of the evaluatee's overall presentation. There is no evidence to support the use of the Miller Forensic Assessment of Symptoms Test, Structured Interview of Reported Symptoms-2, Test of Memory Malingering, or other instruments in the

forensic evaluation of parasomnias. Unless there is a clinical concern for feigned psychiatric illness or cognitive dysfunction, the application of these instruments is likely to be superfluous and may confuse the trier of fact.

Criminal Responsibility

Attorneys are most likely to retain a forensic psychiatrist in cases of alleged sexsomnia for the purpose of a criminal responsibility evaluation. Two relevant defenses pertaining to the criminal responsibility of individuals with sexsomnia include the automatism or unconsciousness defense and the not guilty by reason of insanity (NGRI) defense. In many jurisdictions in the United States, a defendant may be acquitted if his conduct results from an automatism or occurs unconsciously. Voluntary intoxication is often excluded as a qualifying condition. If an individual has genuine sexsomnia and there is evidence that the alleged sexual act(s) occurred during an episode of sexsomnia, then it logically follows that the behavior was involuntary because the individual was asleep at the time. In Canada, however, the automatism defense leads to acquittal only if the trier of fact finds that the defendant does not have a disease of mind. If determined to have an "insane automatism," however, the defendant may be found "not criminally responsible on account of mental disorder (NCR-MD)" (Ref. 20, p 34) and sent to a psychiatric facility, as occurred to one subject in the review by Organ and Fedoroff.²⁰ In the United States, if an individual is not acquitted on the basis of automatism, then there may be a consideration of an NGRI defense.

When conducting a criminal responsibility evaluation related to alleged sexsomnia, the wording of the insanity statute may be critical for its potential application. To begin with, whether the diagnosis of sexsomnia constitutes a disease of the mind for the purpose of the insanity standard may be controversial. While the Ontario Court of Appeal held that sexsomnia represents a mental disorder in the case of a young man who had non-consensual sex with a woman at a party,²⁷ the same question will likely arise in other courts. If allowed, then one must consider the specific elements of the standard. The forensic psychiatrist should be capable of explaining an individual's cognitive and volitional impairments in cases of genuine sexsomnia. In states with the M'Naughten standard, the forensic psychiatrist would explain that the defendant's knowledge of his act and knowledge of its wrongfulness were both potentially impaired at the time of the alleged offense. One cannot know one's behavior when in slow-wave sleep, regardless of how purposeful the behavior may appear. In states with a volitional criterion for insanity, the forensic psychiatrist would note that there is no ability to refrain from one's involuntary behavior conducted while asleep. A criminal responsibility evaluation would also consider the role of a subject's alcohol use because alcohol may be a trigger for parasomnic episodes. In cases of frank intoxication prior to sleep, it is likely that alcohol use will invalidate an insanity defense in many jurisdictions on the basis of voluntary intoxication.

For defendants with sexsomnia who are found NGRI, the next relevant consideration is whether they meet criteria for forensic commitment to a hospital. In most jurisdictions, the court would hold a hearing to determine whether the person found NGRI is currently mentally ill and subject to a court order for hospitalization. Patients with sexsomnia, however, are unlikely to benefit from inpatient psychiatric hospitalization. Treatment involves risk-reduction strategies because episodes of sexsomnia occur infrequently in adults. Alternatively, benzodiazepine medications may be utilized as noted above. Inpatient treatment targets and subsequent release decision criteria for a patient with sexsomnia would be unclear.

Despite this, courts may be uncomfortable with conditional or immediate release of defendants found NGRI, regardless of mental condition. A conditional release plan could include adherence to outpatient

Table 3 Conditional Release Considerations for Patients With Sexsomnia

Avoidance of triggers
Abstinence from alcohol and other drugs
Avoid shift work that disrupts sleep schedule
Stress reduction measures or psychotherapy
Risk-reduction strategies
Treatment with clonazepam
Treatment of co-occurring sleep disorders
Sleeping in bed with no bed partner
Sleeping with door locked to prevent sleepwalking
Forensic considerations
Presence of paraphilic interests or disorders
Use of automatism/unconsciousness or not guilty by reason of insanity defenses
Unclear benefit from psychiatric hospitalization
Unclear utility of sexual offender registry

treatment recommendations and safety precautions to reduce the risk of recurrence, as summarized in Table 3. Measures to reduce the risk of recurrence include abstinence from alcohol and other substances, sleeping in one's own room, treatment for comorbid sleep disorders, and avoidance of shift work that affects one's sleep schedule. Individuals found NGRI for a sex offense who are released back to the community typically register with their state's sex offender registry, a process that may be of questionable utility for an acquittee with sexsomnia. Forensic experts have a role in educating legal decision-makers about the appropriate course of treatment for sexsomnia and how to develop a risk-minimization plan on an outpatient basis for individuals found NGRI on the basis of sexsomnia.

Conclusion

With growing recognition of sexsomnia as a legitimate NREM parasomnic disorder, individuals with both a genuine sleep disorder and those seeking to avoid criminal culpability are likely to employ the diagnosis in legal proceedings with increasing regularity. Forensic psychiatrists can and should play an integral role in the evaluation of defendants alleging sexsomnia. Forensic psychiatrists can assist by conducting a psychosexual evaluation, assessing for the presence of paraphilic disorders, identifying additional sexual violence risk factors, noting evidence of malingered sexsomnia, and opining on the criminal responsibility and appropriate risk management measures for individuals with a genuine parasomnia. Sexsomnia cases are

an arena in which the forensic psychiatrist is likely to work with experts in other relevant fields, in particular sleep medicine physicians.

Many questions pertaining to sexsomnia remain unanswered. The relationship between sexsomnia and waking human sexuality (including sexual orientation, normophilic and paraphilic sexual interests, and sexual violence risk) is of the utmost importance to the forensic psychiatrist assessing individuals alleging sexsomnia. Forensic psychiatrists must be aware of these current limitations and communicate them where appropriate in reports and testimony. In the absence of strong evidence, experts should conduct a thorough evaluation as with any other accused sexual offender, while considering the practical and theoretical concerns pertaining to the diagnosis.

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