Sleep Medicine

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SEXSOMNIA

(Sexual behavior in sleep)

Abnormal sexual behavior can emerge during sleep and is described as '*sexsomnia*', '*sleep sex' and 'atypical sexual behavior during sleep'*.

Although until recently sexsomnia has been classified as variant of sleep walking and confusional arousals, a comprehensive classification has been recently suggested and it is likely that sexsomnia will be classified as a separate entity (tables below).

The prevalence is difficulty to establish as people are reluctant to report it. Questionnaire assessment suggests that 6-10% of the population report at least one case of sexsomnia. Precipitating factors include contact with the bed partner, stress and fatigue, alcohol and drug use.

Medico-legal issue of *claiming* sexsomnia for sexual acts with minors or in aggressive behavior is a particularly difficult area.

In a recent case reviewed in this clinic there was a combination of sleep driving as well as sexsomnia, which caused a major distress to the patient.

Treatment includes identification of potential cause and avoidance of triggers. Short acting benzodiazepines are usually effective but need to be continued long term.

I take this opportunity to wish you and your family a Merry Christmas and Happy New Year.

Table 1—Sleep Related Disorders and Abnormal Sexual Behaviors and Experiences

I) Parasomnias with abnormal sleep related sexual behaviors (sexual vocalizations/talking/shouting, masturbation, fondling another person, sexual intercourse with or without orgasm, agitated/assaultive sexual behaviors):
   A) Confusional arousals (with or without obstructive sleep apnea)
   B) Sleepwalking
   C) REM sleep behavior disorder (RBD) (?)[1]

II) Sleep related sexual seizures (sexual vocalizations/moaning/shouting, masturbation, libidinal hyperarousal, genital arousal, ictal orgasm, sexual automatisms, agitated/assaultive sexual behaviors)

III) Sleep disorders with abnormal sexual behaviors during wakefulness and wake-sleep transitions:
   A) Kleine-Levin syndrome (broad range of hypersexual and deviant sexual arousal and behaviors)
   B) Severe chronic insomnia (increased libido, genital arousal, compulsive sexual behaviors)
   C) Restless legs syndrome (masturbation, rhythmic pelvic/coital-like movements)

IV) Special clinical considerations:
   A) Narcolepsy (compelling sexual hypnagogic/hypnopompic hallucinations and REM-onset dream attacks, cataplectic orgasm)
   B) Sleep exacerbation of persistent sexual arousal syndrome (genital-sensory sexual arousal without increased libidinal arousal; sexual behaviors)
   C) Sleep related painful erections and increased sexual activity (increased sexual behaviors—masturbation and intercourse)
   D) Sleep related dissociative disorders (pelvic movements and other sexualized behaviors, attempted reenactments of past sexual/physical abuse scenarios)
   E) Nocturnal psychotic disorders (sexual delusions/hallucinations after awakenings)
   F) Hypersexuality after nocturnal awakenings
   G) Miscellaneous (naps; [REM] sleep erections and sexual vulnerability; medication-induced states) (masturbation, sexual intercourse, sexual hypnagogic/ hypnopompic hallucinations with or without sleep paralysis)

[1]Three patients with histories of abnormal sleepsex were diagnosed with RBD, but polysomnographic (PSG) monitoring did not document any sexual or nonsexual behaviors during REM sleep; only REM sleep without atonia was documented by PSG monitoring.

Table 3—Terminology of Abnormal Sleep and Sex[1]

Terms	Definitions and Comments
Sleep related abnormal sexual behaviors (SRASB)	From *ICSD-2*,[2] a variant of confusional arousals and sleepwalking, with or without associated obstructive sleep apnea.
Sleepsex, sexsomnia, sexual behavior in sleep (SBS)	Synonymous, interchangeable terms that encompass all abnormal sexual behavior and experiences surrounding sleep: within NREM or REM sleep, and during sleep-wake transitional states. The etiologies include parasomnias and other sleep disorders. At present, SRASB should be considered a subset of these terms.
Epileptic sleepsex/sexsomnia/SBS, sleep related sexual seizures	Synonymous terms, analogous to those listed above, but with an epileptic etiology; encompass ictal and postictal sexual automatisms, genital and sexual hyperarousal, rhythmic pelvic thrusting, and ictal orgasms.
Sleepsex moaning, sleepsextalking, sleepsexshouting	Sexual vocalizations and verbalizations during sleep (including profanities), as isolated phenomena or emerging with other SBS.
Epileptic sleepsex moaning, sleepsextalking, sleepsexshouting	Analogous to the terms listed above, but with an epileptic etiology.
Sleepsex snoring	Snoring during sleepsex, associated with obstructive sleep apnea.
Hypersexuality with Kleine-Levin syndrome; chronic, severe insomnia; or restless legs syndrome	Excessive, inappropriate, or deviant sexuality during wakefulness, or wake-sleep transitional states, that is closely associated with these sleep disorders.
Sexual hypnagogic or hypnopompic hallucinations (including rape); sexual REM-onset dream attack	Usually associated with narcolepsy; prone to enduring convictions that the sexual experiences had actually occurred.
Cataplectic orgasm, peri-orgasmic cataplexy	Synonymous terms that refer to a cataplectic attack being triggered by orgasm.
Sleep exacerbation of persistent sexual arousal syndrome	Sleep exacerbating a wakeful sexual disorder.
Hypersexuality with sleep related painful erections (SRPE)	Excessive or inappropriate sexual activity associated with SRPE.
Hypersexuality with sleep related dissociative disorders	Rhythmic pelvic movements, other sexualized behaviors, and attempted reenactment of past sexual abuse scenarios.
Nocturnal sexual delusions and hallucinations	Emerge before sleep onset or after awakenings. Associated with primary psychotic disorders, Parkinson's disease (esp. with dopaminergic therapy), and other neurologic conditions.
Hypersexuality during nocturnal awakenings	De novo onset of nocturnal hypersexuality emerging with pallidotomy and Deep Brain Stimulation (DBS) therapies of Parkinson disease.

[1]Covers the range of abnormal sleep related and sleep disorder-related sexual behaviors.
[2]ICSD-2: International classification of sleep disorders, 2nd edition, 2005.

Table 2—Data from 31 Published Cases of Parasomnias and 7 Published Cases of Epilepsy with Abnormal Sleep Related Sexual Behaviors & Experiences

Category	Parasomnias (n=31)	Sleep Related Epilepsy (n=7)
Gender, % (n)		
Male	80.6% (25)	57.1% (4)
Female	19.4% (6)	42.9% (3)
Age, years, mean ±SD (n)		
Total	31.9 ± 8.0 (30)[1]	37.7 ± 8.5
Male	32.1 ± 8.5 (24)	34.0 ± 3.5
Female	30.8 ± 6.4 (6)	42.7 ± 11.6
Age, sleepsex onset, years, mean ±SD (n)		
Total	25.9 ± 8.7 (17)[2]	32.0 ± 9.6
Male	27.4 ± 7.9 (15)	27.0 ± 9.1
Female	14.5 ± 3.5 (2)	38.7 ± 5.6
Duration, sleepsex, years, mean ±SD (n)		
Total	9.5 ± 6.1 (8)[3]	12-16 yrs (n=3), brief (n=4)
Male	8.3 ± 6.5 (6)	12,16 yrs (n=2)
Female	13.0 ± 4.2 (2)	12 yrs (n=1)
Sleepsex behaviors, % of patients (n)		
Masturbation	22.6 % (7) (4 male, 3 female)	14.3% (n=1) (1 male)
Sexual vocalizations, talking, shouting	19.3% (6) (n=2 moaning; n=4 talking) (2 male, 4 female)	28.6% (2) (n=1 moaning; n=1 shouting) (2 male)
Fondling another person (13 male, 1 female)	45.2% (14)	0%
Sexual intercourse (13 male, 0 female)	41.9% (13)	0%
Sexual hyperarousal (experiential)	0%	28.6% (n=2) (male, female)
Ictal orgasm	N/A	42.9% (n=3) (1 male, 2 females)
Ictal sexual automatisms	N/A	14.3% (n=1) (male)
Total # sleepsex behaviors	n=40	n=9
Amnesia for sleepsex, % (n)	100% (31)	28.6% (2)
Recall of sleepsex, % (n)	0% (0)	71.4% (5)
Agitated/assaultive sleep related sexual behaviors,%(n)	45.2% (14)	14.3% (1)
Sleepsex with minors, %(n)	29.0% (9)	0%
Legal consequences from sleepsex, % (n) (2 with adults; 9 with minors[4])	35.5% (11)	0%
Other consequences, % (n)		
I) Adverse: Physical		
Self	6.4% (2)	71.4% (5)
Other	61.3% (19)	0%
Adverse: Psychosocial		
Self	67.7% (21)	57.1% (4)
Other	80.6% (25)	14.3% (1)
Total	100.0% (31)	100.0% (7)
II) Positive, self/other (with or without adverse consequences)	12.9% (4)	57.1% (4)
Polysomnography (PSG), % (n)	83.9% (26)	28.6% (2)
Sleep EEG (without PSG)	0%	14.3% (1)
No PSG or sleep EEG	16.1% (5)	57.1% (4)
Total # parasomnias[5]	71	N/A (not reported)
Mean # (±SD) per patient (range, 1-4)	2.2 ± 1.0	
Final diagnosis, sleepsex etiology[6], % (n)		
Disorder of arousal (DOA) (CAs, n=26; SW, n=2) (OSA comorbidity, n=4)	90.3% (28)	N/A
RBD	9.7% (3)	N/A
Sleep related seizures	N/A	100% (7)
Treatment efficacy[7]: (controlling sleepsex), % (n)		
Clonazepam at bedtime	90.0% (9/10): (6/7-DOA; 3/3-RBD)	
Nasal CPAP at bedtime	100.0% (2/2-OSA)	N/A
Control of nocturnal seizures[8]	N/A	100% (5)

[1]N=1, age not reported.
[2]Age of sleepsex onset was known in 54.8% (17/31) of patients, and was unknown or not reported in 45.2% (14/31) of patients.
[3]Duration of sleepsex reported on n=8 patients; n=8 had only one reported episode of sleepsex and n=1 had two reported episodes within 1 month, so duration is not applicable; n=14, duration not known.
[4]Adult males assaulted 9 girls (8-15 years old [n=8], and a "teenage girl" [n=1]).
[5]Confusional arousals [CAs] (n=24); Sleepwalking [SW] (n=21); Sleeptalking and vocalizations, sexual & nonsexual (n=15); Sleep terrors (n=7); REM sleep behavior disorder [RBD] (n=3); sleep related eating disorder (n=1). [A history of enuresis was not included in these data].
[6]In all 3 patients with RBD, no behaviors (sexual or nonsexual) were documented in REM sleep. OSA=obstructive sleep apnea).
[7]An additional patient with a DOA responded to clonazepam, but with remission maintained after clonazepam was discontinued. Another patient with a DOA did not respond to limited therapy consisting of low-dose (25 mg) clomipramine at bedtime. Therefore, these two cases were kept separate from the treatment outcome data. For the remaining n=17, treatment was not mentioned. [CPAP: continuous positive airway pressure].
[8]Control of nocturnal seizures was achieved with anticonvulsant medications. N=2, treatment outcome was not mentioned.