

## Complex sexual behaviors during sleep as a manifestation of epilepsy: a case series

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*Sleep*, Volume 42, Issue 3, March 2019, zsy233, <https://doi.org/10.1093/sleep/zsy233>

Published: 21 November 2018 **Article history** ▼

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### Abstract

#### Study Objectives

Complex sexual behavior during sleep (CSBS) is a well described clinical entity in nonrapid eye movement (NREM) sleep parasomnias (i.e. sexsomnia). We report a retrospective case series of CSBS as clinical manifestation of epileptic seizures and compare them with the semiology of sexsomnia.

#### Methods

Video-electroencephalography (EEG)-monitoring data of patients with epileptic and nonepileptic paroxysmal events from one tertiary epilepsy center between 2013 and 2016 were retrospectively reviewed. Clinical features and presurgical, electroclinical, and follow-up data are presented and then discussed in the context of other published cases.

#### Results

From 4,629 patients, 6 patients had CSBS. EEG, single photon emission computed tomography (SPECT), magnetic resonance imaging (MRI), and histopathology confirmed an epileptic origin in four female patients, with temporal or frontal seizures. Two male patients had sexsomnia. None of the epilepsy patients had parasomnias. Clinical criteria to differentiate epileptic from parasomnic CSBS were: events also occurred out of wakefulness; current presence of additional nonsexual manifestations of epilepsy; sexual behavior only as part of a broad spectrum of emotional and motor automatisms; stereotyped behavior pattern without modulability by bystanders; unarousability during the event; no completion of sexual intercourse. The accuracy of the clinical diagnosis was improved by the development of an algorithm comparing patients' fulfillment of the criteria of epilepsy versus parasomnia.

#### Conclusions

In our cohort, CSBS was a rare ictal phenomenon in temporal or frontal seizures. Symptomatological similarities with sexsomnia might be explained by the same phylogenetically primitive "central pattern generator" manifesting in ictal CSBS by activation and in sexsomnia by disinhibition. Ictal CSBS should be considered in the differential diagnosis of sexsomnia.

[parasomnias](#), [sexsomnia](#), [sexual behaviors of sleep](#), [EEG](#), [temporal lobe](#), [frontal lobe](#), [focal seizure](#)

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Online ISSN 1550-9109

Print ISSN 0161-8105

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