

Parasomnia overlap disorder: a complex sleep disorder presentation

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Abstract: Parasomnia overlap disorder is a rare sleep disorder characterized by the simultaneous occurrence of two or more different parasomnias, resulting in complex and disruptive sleep related behaviors. Here is a case about 68 years old Muslim retired government employee from urban background presenting with the complaints of repeated episode of rising from bed and walking during sleep, history of being found under bed after sleep, recurrent dysphoric dreams for 11 years. This case report presents the clinical profile and management of a patient diagnosed with parasomnia overlap disorder, highlighting the challenges faced in diagnosis, treatment and long-term management of this complex sleep disorder.

Declaration of interest: The survey was funded by Non-Communicable Diseases Control Program of Directorate General of Health Services, Bangladesh.

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Keywords: Parasomnia overlap disorder; somnambulism; dysphoric dream; complex sleep disorder.

Introduction

Parasomnia overlap disorder (POD) occurs when a patient demonstrate features of both non-rapid eye movement (NREM) sleep parasomnias (e.g. confusional arousals, sleep walking, sleep terrors and sleep sex) and rapid eye movement (REM) sleep parasomnia (REM sleep disorder (RBD) and nightmares).¹ POD is classified by the International Classification of Sleep Disorder (ICSD-2) as a variant of REM sleep behavior disorder (RBD).² POD was first described in 1997 as a special form of parasomnia³ and is a variant of RBD.⁴ In a literature among 139 POD cases, 62.2% were found idiopathic based on ICSD-2 criteria.⁵ In adults, the life time prevalence of various parasomnia ranges from 4%-67% summarized in Table 1.⁶ In a series, approximately 21% of all RBD cases and 28% of all sleep walking or sleep terror were later determined to have POD.⁷ In another report of 93 patients with RBD, 10 patients also had a history of sleep walking or nocturnal wandering behavior.⁸ The POD can be seen secondary to narcolepsy, rhombencephalitis, multiple sclerosis, brain tumor, spinocerebellar ataxia type-3, psychiatric disorder, substance abuse and alcohol withdrawal.⁹

Treatment of POD should first be focused on resolving co-morbid conditions that fragment sleep, such as sleep disordered breathing and periodic limb movements with

arousals and the elimination of suspected precipitating pharmacology. Clonazepam is often effective, particularly for patients with violent dream-enactment behavior. For medication resistant patients a customized bed alarm may help prevent sleep-related injury.¹⁰

Case Report

A 68-year-old, Muslim, widower, educated up to HSC, retired government employee from urban background, visited NIMH outdoor with the complaints of repeated episodes of walking during sleep, recurrent dysphoric dreams and being often found under the bed while sleeping by family members for the last 11 years. His sleep pattern was previously normal. On several occasion he went from his room to another room while asleep, was found under the bed, fell from bed, and punched and fractured his finger within an hour of sleep onset. His family members tried to wake him up at the time, and while he was partially awakened, he could not remember the whole dream. The dream was not associated with any abrupt arousal and panicky scream, palpitation, sweating or rapid breathing. These types of behaviors occurred repeatedly. There was no history of difficulty in initiating and maintaining sleep, daytime sleepiness, snoring, gasping, or

breathing pause during sleep. There was no history of substance use, psychiatric illness, hypoglycemia, medication related to these symptoms.

On general examination and other systemic examination, no abnormality was revealed. On mental state examination, no abnormality was found. Regarding insight, patient admitted that he had some sleep related problems and he needed treatment for that.

A complete neurological examination was performed which revealed no abnormality. All routine investigations, including MRI of brain were normal. His laboratory screenings and DOPE test were normal. Polysomnography (PSG) with video recording was performed in sleep lab. Sleep apnea and periodic limb movement disorder, as possible additional triggers for parasomnias, were excluded. PSG findings, such as RSWA (REM sleep without atonia) and repeated transition from N3 sleep to wake with simultaneous motor behavior, co-related with physiological mechanisms of REM as well as non-REM parasomnia. However, no characteristic diagnostic behavioral manifestations (somnambulism and sleep terrors) were seen in the video in sleep lab. For the lack of a more accurate sleep disorder diagnosis, we diagnosed the patient with POD.

Psychoeducation, reassurance, behavioral guidance (risk minimization, optimal sleep timing, relaxation) and cognitive methods (stress and anxiety management) were offered. The risk to the patient and family members were addressed by counseling and education, avoiding violent consequences by locking the doors, etc.

A different treatment approach had to be considered since the traditional treatment option of Clonazepam, with efficacy for both non-REM and REM parasomnia, had shown no response, while Mirtazapine, a typical treatment option for RBD and sometimes used in somnambulism, had yielded no response, nor adverse effect. Finally, the patient reported partially symptomatic relief with Quetiapine (50 mg) at night. Parasomnia episodes did not recede, but the frequency at which they occurred almost every night reduced, and the severity reduced as well.

Discussion

Here we present an adult non-REM parasomnia patient who presented with comorbid RBD symptoms. Non-REM parasomnia is uncommon in adult without predisposing neurological, psychological, or pharmacological factors. Non-REM parasomnias manifesting as partial arousals are sleep walking (2-4% of

adults) and confusional arousals (3-15% of adults).^{11,12}

Our patient started to experience frequent disturbing somnambulism and dysphoric dreams from the age of 57 years and came to us after 11 years of onset of these symptoms. His sleep pattern was previously normal. Then he started to show abnormalities during sleep on several occasions before they came to a psychiatrist. No serious accident took place, but the person was overwhelmed, frightened, and worried about his parasomnia symptoms. Neurological examination, all routine investigations, including MRI of brain, laboratory screenings, DOPE test were normal. Sleep apnea and periodic limb movement disorder, as possible additional triggers for parasomnias, were excluded. No characteristic diagnostic behavioral manifestations (somnambulism and sleep terrors) were seen in the video in sleep lab. For the lack of a more accurate sleep disorder diagnosis, we diagnosed the patient with POD.

In ICSD-3¹³ POD is classified as a subtype of RBD occurring with non-REM parasomnias. However, considering the predominant non-REM parasomnia symptoms, older age of onset and lack of underlying neurological disease, POD was most likely a distinct entity instead of a RBD subtype.¹⁴ Two third of PODs are idiopathic, whereas a third is related to neurological morbidity, especially alpha-synucleinopathies. Other pathologies linked to POD are multiple sclerosis (MS), brain stem structural anomalies or lesions, head trauma, ethanol abuse and PTSD.¹⁵

There is no established treatment for POD. Benzodiazepines have been commonly used for POD and usually the response has been good. Lower grade evidence for medication are antidepressants (e.g., Mirtazapine, Trazodone, TCA), atypical antipsychotics (Quetiapine, Risperidone), Prazosin, Gabapentin, etc.¹⁶

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How to cite this article: Islam MS, Khan MR, Islam MR. Parasomnia overlap disorder: a complex sleep disorder presentation. Arch NIMH. 2023; 6(1): 35-37.

Received 15 Apr 2023, revised 17 May 2023, accepted 01 June 2023.

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