Treatment Approach to Sleep Terror: Two Case Reports

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ABSTRACT

Parasomnias are a group of disorders characterized by abnormal behaviors, physical activities, and autonomic arousal symptoms while transition to sleep or continuation of sleep. Sleep terror (ST) is classified under parasomnias characterized by sudden fear attacks beginning with crying attacks or high-frequency screams and continuing with increased autonomic symptoms. ST occurs in the first few hours of sleep during the delta phase. Further, the lifetime prevalence of ST in adults is less than 1%. It is important to obtain anamnesis from patients' bed partner for a clinical evaluation of ST. Methods, such as evaluating sleep diaries and video recordings, can help ST diagnosis. It is also important to evaluate patients'

medical history, history of substance or alcohol abuse, psychological traumatic experiences, primary or secondary incomes, and detailed neurological aspects. Physician can select some serotonin reuptake inhibitors (SSRIs) or tricyclic antidepressants (TCADs) as medical treatment if patients have a high frequency of attacks. Because of addiction and relapse of ST episodes, benzodiazepines are not preferred as the first-line treatment. In this study, we will discuss ST, which is rare in adulthood, and use of long-acting benzodiazepine based on two cases.

Keywords: Parasomnia, sleep terror, clonazepam, non-rapid eye movement

INTRODUCTION

Parasomnia is defined as the occurrence of involuntary abnormal behaviors, physical activities, and signs of autonomic stimulation while transition to sleep or continuation of sleep (1). In the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) classification, parasomnias are mainly divided into four categories: nightmare disorder (dream anxiety disorder), sleep terror disorder (night terror; NT), sleepwalking disorder, and parasomnia not otherwise specified (2). In the International Diagnostic Classification of Sleep and Arousal Disorders (ICSD-2) classification, parasomnias have been mainly divided into three groups: arousal disorders (stimulation disorders), parasomnias usually associated with rapid eye movement (REM), and other parasomnias (3).

NT is classified under parasomnias in the mentioned classification systems and is characterized with sudden attacks of fear associated with the increase in autonomic signs following crying and loud shouting during the first few hours of sleep during the delta stage (associated with the NREM period) (4). Clinically, the person wakes up screaming, scaring, or performing sudden and self-destructive acts (like jumping, running, crashing into something, harming the person beside). The person is non-responsive to the external stimulus during this period and is generally woken up forcefully by the person beside. The person may predominantly experience cognitive impairment signs, such as disordered orientation and memory problems, confusion, and fear on waking up. In addition to these mental symptoms, somatic symptoms associated with the overstimulation of the autonomic system, such as palpitation, sweating, shaking, skin rubor, pupillary response, may appear. While adults generally cannot remember what they experienced the previous night, children can indistinctly remember their fear (5,6).

NT is mostly observed in childhood (between 5 and 7 years) and is spontaneously recovered in adolescence. NT prevalence is approximately 3% in children aged 4–12 years. Life-long prevalence in adults is less than 1% (7). Genetic factors are important and the risk of occurrence among the first-degree relatives is ten folds more compared with those with no family history of NT (8). NT is highly associated with schizoid, borderline and dependent personality disorder, post-traumatic stress disorder, generalized anxiety disorder, and sleepwalking, although it has been believed that factors associated with central nervous system maturation are involved in the etiology (9).

Nightmare disorder should be considered in the differential diagnosis of NT, and the history should be carefully evaluated. Nightmare disorder is different from NT as it mostly occurs late at night (in the REM period of sleep), with a lowered motor activity; in nightmare disorder, the person is not confused on waking up, remembers the nightmares in detail, and the disordered orientation immediately

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recovers (7). Another condition in the differential diagnosis is REM sleep behavior disorder defined in ICSD-2, although it is not included in the DSM-IV classification system. REM sleep behavior disorder is represented with an increased motor movement caused by the lack of atony, which is supposed to exist during the REM sleep. It is a disorder characterized by performing violent acts (hitting, screaming, swearing), which is contrary to the general personality, during the REM sleep, and is mostly observed with an advanced age. The transition from sleep to awareness is very quick; thus, the person remembers the dream, and confusion does not appear.

The history collected from the person beside is essential in the clinical evaluation. Methods, such as evaluating sleep diaries and video recordings, may also prove helpful in diagnoses. Evaluation of medical history, alcohol or drug abuse, history of psychological trauma, existence of primary and secondary gains, neurologically detailed evaluation are significant in diagnosis (1). The first step in the treatment of NT is to provide safety in the bedroom and to remove all the objects in the surrounding area that could physically harm the patient. Clinicians should avoid sedative-hypnotic substances in cases where the condition is triggered by alcohol or drug abuse. Education and information on sleep hygiene should be provided. The cycle of sleep and awareness should be carefully assessed. If NT attacks rarely appear, these steps may be sufficient. If the frequency of the attacks is high and it considerably affects functionality, TCA and SSRI may be preferred in the treatment. Benzodiazepines are not primarily preferred as they may cause addiction or/and more violent attacks of NT after the drug cessation (10). In this study, following the informed consent by the patient, the use of a long-acting benzodiazepine in the treatment of NT, which has rarely been observed in the adult period, and its clinical features will be discussed based on two cases.

CASES

Case 1

A 58-year-old, primary school graduate, married female applied to the psychiatry outpatient services with complaints of nightmares, screaming in sleep, and not being able to wake up on time. The complaints started after a plate operation owing to hip fracture approximately two years ago. The patient received treatments of sertraline, quetiapine, alprozolam, and olanzapine for 6 to 7 months at unstable doses and duration without any improvement. Furthermore, her partner has obliged to wake up the patient because of her screaming in sleep and increased activity in bed. The patient's mind was busy with the nightmares during the day, but she could not precisely remember the content of her dream. As her sleep is affected at night, sleepiness and tiredness affects her functionality during the day. Following the psychiatric evaluation, the psychotropic drugs were stopped by tapering the dose; the patient does not have a history of alcohol or drug abuse. Thyroid function tests, levels of B₁₂ vitamin and folic acid, hemogram, and toxic medication screening revealed values within the normal range. Rheumatoid viral infection markers were found to be negative. No abnormalities were observed in the cranial MR, EEG, and video EEG. Moreover, findings were normal in the neurological examination and neurology consultation. The patient was diagnosed with "NT" according to the Structured Clinical Interview (SCID-I) (11) for the DSM Axis I disorders. Behavioral methods were selected as the first-step intervention, and the patient was required to maintain a sleep diary and was educated about sleep hygiene. During the follow-up, it was noticed that the patient could not write her sleep diary as she could not remember the associated nightmares. She thought "I must be having nightmares" about the fearful moments at night. She noted her experiences at night according to the statements of her partner, including that her face flushed, her breathing changed, and that there were sudden moves such as crashing and hitting

her arms and hands. Because desired treatment results could not be achieved by only behavioral methods and the complaints of the patient continued in the follow-up, 75-mg/day clomipramine and 1-mg/day lorazepam were added to the treatment. Moreover, complaints about falling asleep and inability to sustain sleep decreased; however, the medication was stopped because of no improvements in the symptoms of nightmare, night screaming, hyperactivity in sleep and tiredness in the morning, and an oral drop of 1-mg/day clonazepam was administered thereafter. Nightmares reduced by the third day, and the quality of sleep increased. Further, night screaming, acts of violent behavior in sleep, and extreme mental occupations reduced. This treatment was continued for one month more at the same dose, and the patient and her partner consistently reported that the symptoms were completely abolished. The administration of oral clonazepam drop (1 mg/day) has been continued for 8 months and was ended by tapering the dose by 0.2 mg (two drops) per week in a month. Neither an exacerbation of NT attacks nor a sign of abstinence was observed during six months of follow-up after discontinuation.

Case 2

A 70-year-old, primary school graduate, married male patient applied to the psychiatry outpatient services with complaints of fearful dreams, self-destructive acts in sleep, sweating on awakening, flushing, and screaming. He reported that the complaints started eight months ago, and they occurred at least two nights a day. He has also suffered the concern of "will it happen again?" at other nights. The complaints of imperceptions of whether he is asleep or not, having fearful dreams but not being able to remember the content of the dream, screaming in sleep, hitting himself, involuntary arm and hand movements, falling from the bed, hitting the head were present. He states that he wakes up as a result of his partner's efforts to wake him up, that he does not remember the period and the dream content, but he feels very tired. He has experienced tiredness, weakness, concentration-related problems, and disability in functionality during the day because of a disordered sleep. Further, he cannot sleep at his relative's house because expecting an NT attack created dense familial problems. It was understood that the patient applied to another psychiatry clinic 6 months ago; that he did not benefit from the treatment of quetiapine, imipramine, clomipramine, sertraline, and diazepam; and that he presently does not use any medications. There were no typical characteristics in his family history. No explanatory findings were found in the general medical condition for exclusion. Furthermore, the patient was diagnosed with NT according to the SCID-I classification (11) for the DSM-IV Axis I disorders, and the administration of 1 mg/day oral clonazepam drop was started. The patient considerably benefited from the treatment. He experienced no NT for 6 months following the clonazepam treatment. Hence, his medication treatment was stopped in a month by tapering the dose by 0.2 mg (two drops) weekly. The patient had no NT attacks for 3 months during the follow-up. No abstinence symptom was observed because of the cessation of clonazepam.

DISCUSSION

According to epidemiological data, although NT cases are rarely observed in adults, doctors could come across cases with NT in psychiatric outpatient services. Because our information about the treatment of NT remains unclear, doctors use different options of medication. While NT is mostly observed in children, and it can mostly be clinically treated by providing safety instructions without the need of medication (12), the treatment methods, frequency and severity of signs, and findings remain unclarified in adults. Although there are concerns about the use of long-acting benzodiazepine in the treatment of NT, it was found that the treatment of clonazepam was effective in two cases who did not respond to the use of SSRI and TCA as the first-line treatment. Exacerbation or recurrence was not observed in

the follow-up period of 3 to 9 months after the cessation of clonazepam in both cases. These observations suggest that clonazepam is an option for treating NT. It is well known that benzodiazepines inhibit stages 3 and 4, which are known as slow-wave sleep of the NREM sleep (13); NT occurs at this stage of sleep (3). Therefore, it is believed that benzodiazepines play a crucial part in the treatment of NT. However, there are limitations to the use of benzodiazepine as there is a risk of benzodiazepine addiction and of re-occurrence (rebound) of the signs in a more severe form because of the cessation of the medication (10). These medications could prove to be an effective and safe option if some issues, such as appropriate indication, careful tracking, gradually reducing benzodiazepines, are resolved, as observed in the present two cases.

If we consider that non-REM and REM period sleep disorders may cause legal problems and that the legal process remains unclear (14), it is important to clarify the prevalence and rate of NT in adults, severity of symptoms, and treatment strategies. Considering these factors, it is believed that there is a need to evaluate the treatment of patients with NT because of low incidence and prevalence rates of NT and a need for epidemiological studies in this field.

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