*Case Report*

# Dreaming with Content of Obsessions before Relapse of Clinical Symptoms in a Rare Case of Obsessive-Compulsive Disorder

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## Abstract

**Background and Objective:** Obsessive-compulsive disorder (OCD) is considered as a chronic disabling psychiatric disease with poor response to pharmacological treatments. The poor understanding of mechanistic links between psychiatric diagnoses and sleep abnormalities contributes to the lack of certainty; a clarification of its relationship with dream content seems interesting.

**Case Report:** The case was a 37-year-old Iranian woman with OCD. The dreams with obsessive content had begun almost two months before the recurrence of the clinical symptoms. As she got closer to the time of the relapse of clinical symptoms, she had more frequent and longer dreams with content of washing; treatment began with clomipramine. Recurrence of the next episode also started with dreams. After the last episode, she continued her medication and currently she is symptom-free for the past two years.

**Conclusion:** The correlation of the dreams' content and clinical symptoms of OCD can be a clue for early diagnosis of symptoms and helps prevent clinical symptoms. However, we cannot neglect the effects of the disorder on brain function and sleep structure.



**Keywords:** Obsessive-compulsive disorder; Sleep; Dream

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## Introduction

Obsessive-compulsive disorder (OCD) is a chronic psychiatric disease with poor response to pharmacological treatments (1).

Patients with OCD are reported to have hyperactivity in the orbitofrontal cortex (OFC), anterior cingulate cortex (ACC), and basal ganglia. This involvement causes intrusive and distressing thoughts and ritualistic behaviors (2). It is a common psychiatric disorder with a lifetime prevalence of 1-3 percent and is characterized by obsessions (uncontrollable thoughts) and compulsions (repetitive behaviors) or both in order to reduce the fear or worries caused by obsessions (3).

Probability of OCD is associated with the number of obsessions and compulsions; however, only small proportions of participants with OCD in a study met Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria fully for lifetime (2.3%) or 12-month (1.2%) OCD. OCD is associated with substantial comorbidity, not only with anxiety and mood disorders, but also with impulse-control disorder and substance use disorder (4). Many patients with OCD show a wide range of functional impairments and report a substantially decreased quality of life (5). Clinical investigations show that patients with OCD occasionally report increased frequency and intensity of dreams in the course of exposure to the treatment. In context of the discussion over mental strain because of exposure, the observation of dreams during this phase might suggest the real extent of intensive and lasting effects of exposure on the patient's experience (6).

Abnormal dream content is seldom considered of clinical utility in contemporary psychiatric

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practice. However, several studies indicate that specific dreams of a disorder are frequently reported by most subjects diagnosed with a mental disorder (7). The poor understanding of mechanistic links between psychiatric diagnoses, sleep abnormalities, and chronobiological disruptions contributes to the lack of certainty (8).

This issue that whether and to what extent obsessive thoughts persist within patients' dreams remains unclear. Given the peculiar distressing nature of waking thought in this population, a clarification of its association with dream content seems necessary. Here, we report a rare case of OCD who was dreaming with content of obsessions before relapse of symptoms.

## Case Report

The case was a 37-year-old Iranian married woman with housewife occupation. She had been a known case of OCD since eight years ago. First episode of her disorder pulled over about three months and recovered without any medication or psychotherapy. After that and because of severity and continuity of next episodes, she referred to psychiatrist and treatment started with clomipramine (20 mg per day). Patient's consent was obtained for anonymous publication of her disease characteristics. By taking the medicine, the symptoms subsided soon. The patient did not have any history of parasomnia, insomnia, or hypersomnia. During enquiry in her family history, it was found that she had an aunt with OCD (washing and checking type). The major problem about this patient was the content of her dreams, which was occurring since a long time before the recurrence of clinical symptoms. As she was closer to the time of the relapse of clinical symptoms, there was more frequent and longer duration of dreams with content of washing. A few days before the onset of the clinical symptoms, the frequency of dreams with washing content increased to every night. The dreams with content of obsessive washing had begun almost two months before the recurrence of the OCD's clinical symptoms. For the second time, the treatment began with clomipramine (20 mg per day) and therefore, the dreams with obsessive content were subsided. Hence, the clinical symptoms did not relapse until the next nine months, even when she stopped her medication after recovering of her dreams.

The recurrence of the next episode also started with washing dreams. At this time, she did not take any medication and clinical symptoms of OCD occurred nearly one month after washing dreams. Treatment with 20 mg clomipramine per day started again and within a 3-week period, the symptoms of OCD completely subsided. After that, she stopped her medication again for about 2 weeks after her recovery and for the last one, symptoms occurred 7 months later with dreams and treatment with 20 mg clomipramine started again and after that, the symptoms of obsessive washing dreams completely subsided.

After the last episode, she continued her medication and currently she is symptom-free for the past two years. She did not have any episode of clinical recurrence or obsessive washing dreams.

## Discussion

The mechanism of OCD is not fully understood, while family history has been introduced as one of its risk factors. Our patient had positive family history that could be a trigger for her symptoms. People are diagnosed with OCD when they meet criteria of the disease written in DSM, Fifth Edition (DSM-V) after that physician performs physical examinations and laboratory tests to rule out other conditions. Our patient met DSM-V criteria for diagnosis including repetitive washing of kitchenware.

OCD is a common psychiatric disorder. The association between recurrence of clinical symptoms of the disease and the patient's sleep content, however, was a new point that appeared in this report. Some studies examine the content of dreams and its relation to OCD. According to these studies, discontinuity of obsessive/compulsive content across wakefulness and dreams in patients with OCD is much more common compared to general population. The intrusive quality of cognition, also belonging to obsessive intrusive thoughts, might be an adaptive aspect of human nature (9). New neurobiological models of OCD using neuroimaging techniques for brain activity indicate that a dysfunction in orbitofrontal-subcortical circuits may be the underlying cause (10). Functional imaging studies report a significant hyperactivity in the OFC, ACC, and caudate nucleus of patients with OCD. These results show that dysfunction in cortico-basal ganglia-thalamocortical loop (CBGTC loop) involving the OFC and ACC is associated with OCD. Although these findings are controversial, this hyperactivity may be the cause or a consequence of the OCD symptoms (11). Hyperactivity in these areas and during

rapid eye movement sleep (REMS) could justify the presence of obsessive and ritualistic thoughts that were observed in both the elicited waking reports and in dream diaries (12). This shared pattern of neuro-functional activation across states raises the possibility of intriguing speculative hypotheses. Indeed, REM dreams have been proposed to serve a mnemonic function by elaborating and associating waking experiences into vivid images (13). Typical recall rates for nighttime dreams suggest that dreaming mentation collected in a diary comes preferentially from REM phase (14). Electroencephalography (EEG) studies are needed to better characterize the origin; whereas, formal differences in form and length have been investigated (15, 16). This indicates the distance between dreaming and wakeful activity and in a sense counteracts the theory of integrating daily events during REMS. Indeed, it is remarkable that the stereotyped activity of OCD, which occupies patients several hours a day, has no specific expression in their dreams (17). One possible explanation could be that patients with OCD present a protective mechanism, which prevents any over-expression of obsessions in their dream recalls (18). Another possible explanation is the diurnal cognitive theory of OCD, which considers that obsession and rituals are common phenomena in normal subjects (18).

On the other hand, dreams can be the first symptom of relapse. In other words, problems such as dysfunction in some areas of brain could affect the structure of sleep before the recurrence of clinical presentation. This condition also happened in some cases, such as changing the sleep pattern and hypersomnia before the flu. In this condition, there is a change in the content of the dream. Some studies showed that non–REMS (NREMS) dramatically increased after inoculation of the H1N1 virus to mice with a latency of 16 hours. REMS was significantly suppressed after a longer latency. The study shows that influenza viral infection induces profound and long-lasting increase in NREMS and suppression of REMS. These viral-induced changes in sleep likely represent a host-defense response (19). Furthermore, in people with post-traumatic stress disorder (PTSD), dream patterns associated with trauma are repeated in sleep (20). Therefore, repeating can be seen in dreams and it could happen in OCD before recurrence of clinical symptoms. As a result, repetitive dreams of specific types of behavior such as washing can occur in the patient. Patients with OCD differ from normal subjects in terms of frequency, length, and unpleasantness of obsessions. All of these studies emphasize on close association between OCD and dreaming. Regarding the content of dream in this patient, the closest theory maybe the daily preoccupation of the patient with washing, which appeared in the dreams of the patient before the onset of clinical symptoms or it could be due to dysfunction of some brain loops.

Effect of clomipramine as a tricyclic antidepressant is known to produce a dose-related reduction in REMS (21, 22). Considering these conditions, it can be concluded that dreams of the patient were arising from her daily preoccupation by washing before the onset of clinical symptoms of the disease. Treatment with clomipramine and its effects on REMS suppressed preoccupation with washing and consequently suppressed dreams with content of washing. The treatment prevented the clinical symptoms of the disease before occurrence.

## Conclusion

The correlation between the content of patient's dreams arising from her daily preoccupation with clinical symptoms of OCD can be a clue for early diagnosis of symptoms and prevention of clinical symptoms. However, we cannot neglect the effect of the disorder on brain function and sleep structure. Clinicians should consider content of dreams during visits of patients with OCD and ask patients about their dreams to prevent occurrence of clinical symptoms of disease..

## Conflict of Interests

Authors have no conflict of interests.

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