

## Olfactory Reference Syndrome: A Case Treated with Sertraline and Olanzapine

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**Abstract:** Olfactory Reference Syndrome (ORS) is a rare psychiatric condition in which the affected person has a certain belief that his/her body odor is foul or unpleasant and his/her occupation on this issue leads to a loss of functionality. ORS patients blame themselves because of the smell they emit and avoidance behaviors are evident. Major depressive disorder comorbidity rate is very high. In our case, we have an ORS patient with major depressive disorder (recurrent) and panic disorder comorbidity who suffers from avoidance behavior and loss of functionality due to the thoughts of emitting sweat and foot odor since 23 years. Sertraline- Olanzapine combination therapy and behavioral therapy has been applied; there was a significant improvement in the symptoms.

**Keywords:** Olfactory reference syndrome, major depression, panic disorder, sertraline, olanzapine

### INTRODUCTION

Psychiatric patients sometimes present with persistent olfactory concerns or preoccupation with personal odor [1, 2]. The term “olfactory reference syndrome” (ORS) has been introduced to differentiate primary olfactory concerns from those seen as a consequence of other disorders such as schizophrenia, depression or temporal lobe epilepsy [2]. The age of onset was reported to be less than 18 years of age, with a chronic course. The odors perceived by the patients are frequently described as similar to fetid breath or sweat and thought to be originating from mouth, armpits, genital and anal areas. Repetitive behaviors aimed in reducing odors [i.e. washing, showering, etc] may also accompany the clinical picture [2]. ORS may lead to significant disability and dysfunction [3]. The most frequent co-morbidity in these patients may be Major Depressive Disorder (MDD). Despite these findings the classification and treatment of patients with ORS still remain controversial [4]. As an example, DSM-IV lists it as a somatic type of delusional disorder and a similar picture among patients with Japanese descent (Taijin Kyofusho) as among Culture Related Syndromes [5]. Classification is also disputed with some authors favoring a view of ORS as a particularly severe form of Social Phobia while others endorse a relationship with Body Dysmorphic Disorder (BDD) or a place on the Obsessive-Compulsive Spectrum [6,7,8]. This uncertainty is also reflected in suggestions for treatment with some studies suggesting antipsychotics while others suggest antidepressants either alone or in combination with antipsychotics [9, 10]. Cognitive Behavioral Treatment (CBT), especially involving Exposure Response Prevention (ERP) is also endorsed.

Here we present the evaluation and treatment of a patient with ORS, Panic Disorder and Major Depressive Disorder (Recurrent with Partial Remission in Between Episodes) with a combined treatment of olanzapine, sertraline and ERP. The patient was thought to be worthy of presentation because the age/ gender of the patient was atypical, most cases were reported among younger men [2].

### CASE REPORT

The patient was a 37 year old female who did not work and was estranged and separated from her husband 4 years ago. She left formal education at junior high school and lived with her daughter who was 10 years old, in isolation. She complained of spontaneous, episodic, palpitations, tremor, flushing, dizziness, anxiety and fear of death along with preoccupation with personal odor. The complaints started when she was 13 with preoccupations with personal odor, delusions of reference involving surrounding people, academic problems and social isolation were added in a year. Compensatory behavior such as washing armpits and feet 5- 6 times/ day and bathing 2-3 times / day led to further isolation and she had to leave school. During the two decades preceding her application for treatment symptoms waxed and waned, with 3 distinct, non-seasonal depressive episodes and 4 suicide attempts. Her only applications for treatment were to a psychiatrist with complaints of anxiety seven years ago and to a dermatologist three years ago. In the former, she was unable to disclose her olfactory preoccupations, was diagnosed with Panic Disorder and treated with sertraline 100 mg/ day, receiving partial benefit but

leaving treatment in order not to “offend her physician with [her] odors” while in the latter she requested and received an application of botulinum toxin to her axillae to reduce sweating. In the intervening period she used sertraline 100 mg/ day intermittently and without supervision, separated from her husband due to olfactory concerns, was housebound with reversal of the sleep- wake cycle.

Family history revealed that her sister was diagnosed and treated for MDD and Borderline Personality Disorder. She described no psychoactive substance use other than smoking 2 packs of cigarettes/day for the last 20 years. Physical and neurological examinations were within normal limits while mental status examination demonstrated reduced grooming, communication, sleep, appetite and eye contact, dysphoric mood and affect and no insight. Thought content was notable for delusions of somatic type and of reference. Laboratory investigations including biochemistry, whole blood count, urine analysis, vitamin B12, folate, thyroid function tests, VDRL and HIV were within normal limits. EEG, Q-EEG and cranial MRI were normal. Psychometric evaluations with Panic-Agoraphobia (PASS), Hamilton Depression (HAM-D) and Anxiety (HAI) scales, Beck Depression (BDI) and Anxiety inventories (BAI) revealed scores of 19, 27, 30, 34, 27, respectively. Brief Psychiatric Rating Scale (BPRS) score was found to be 39. After the initial examination, sertraline 100 mg/ day was started and titrated to 200 mg/ day (Therapeutic drug concentration was in normal range). Avoidance behaviors were listed and gradual exposure involving both her daughter and sister was planned. Evaluation at the second month demonstrated scores of 7, 12 and 11 for PASS, HAM-D and BDI while olfactory preoccupations remained unabated. Therefore, olanzapine 5 mg/ day was added and titrated to 10 mg/ day (Therapeutic drug concentration was in normal range). Augmentation with olanzapine reduced intensity of beliefs and social isolation and compliance with therapy was increased. A BPRS evaluation at the 4th month of treatment revealed a score of 17. At the time of writing, she was still being followed up in 6 months remission.

## DISCUSSION

Here the evaluation and treatment of a patient with ORS, Panic Disorder and Major Depressive Disorder (Recurrent with Partial Remission in Between Episodes) with a combined treatment of olanzapine, sertraline and ERP. The features of our patient such as, younger onset with chronic course, intensity of beliefs pertaining to olfactory preoccupations, their egosyntonicity along with lack of insight, prominent compensatory behavior, social isolation and avoidance were in accordance with cases presented in literature [2,7]. Similar to other reports our patient could apply to department of psychiatry only after a long period of suffering. Presence of episodic, autonomic nervous system signs and symptoms, leading to fears of their consequences and anticipatory anxiety and non-

seasonal, distinct episodes of MDD in history were thought to support Panic Disorder and recurrent MDD, respectively. The lifetime prevalence of those twocomorbidities in ORS were reported as 85% and 20%, respectively [2].

When compared with the existing DSM-IV diagnoses, ORS may show considerable overlap with BDD, seasonal affective disorder and with Taijin-Kyofusho. However, our patient also displayed signs and symptoms of Delusional Disorders along with PD and this observation may support the position that ORS may not be fully captured within existing DSM-IV categories [5].

In accordance with previous reports efficacy of SSRI treatment in patients with ORS we started monotherapy with sertraline [6, 8]. Panic attacks, anxiety and depressive symptoms were reduced with this treatment while olfactory preoccupations remained unabated and an antipsychotic had to be added. Previous reports of treatment with pimozide [7], olanzapine [11, 12], quetiapine [13], amisulpiride [14] and risperidone [15] exist. However, we chose olanzapine in order to help insomnia and anorexia. The patient was also observed to benefit ERP.

Our results may support that a separate category of ORS may help in diagnosis and treatment and that SSRIs in combination with antipsychotics may help in those patients, perhaps especially having features of delusional disorders.

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