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Challenges in diagnosis and treatment of olfactory reference syndrome: A case study

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ABSTRACT

In olfactory reference syndrome (ORS), patients exhibit a preoccupation with a perceived foul or offensive odor that they emit, which leads to significant distress and functional impairment. It has been reclassified in the "other specified" category under obsessive-compulsive and related disorder of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). However, there is limited information about how to diagnose and successfully treat this disorder. This study describes the case of a 20-year-old male who was diagnosed with ORS after excluding other differential and treated using combination strategies that included selective serotonin reuptake inhibitors (SSRI) and cognitive behavioral therapy (CBT). Following 16 weeks of treatment, the patient showed significant improvement in his functioning, which was measured with different scales. The scales were used to measure anxiety and depression revealed the patient was below clinical threshold levels. The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), used to measure the severity of obsessive-compulsive disorder (OCD) symptoms, showed mild OCD, with a reduction of 68% from his initial score. In the four-month post-treatment follow-up, the patient maintained his improvement. These findings suggest that further studies regarding the classification of ORS as a specific category are warranted, and should include combination therapy, particularly CBT.

1. Theoretical and research basis for the treatment

Olfactory reference syndrome (ORS) was first introduced by Pryse-Phillips in 1971 (Pryse-Phillips, 1971). It is a psychiatric condition defined by a preoccupation that one emits a foul or offensive odor associated with significant distress and functional impairment (Lochner & Stein, 2003). ORS is not clearly mentioned as a distinct disorder with separate diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).(Sanahuja & Espinosa, 2016). The overlapping symptoms of ORS with other psychiatric disorders, and variable insight levels, have led to ongoing debate regarding its classification (Feusner, Phillips, & Stein, 2010). It was first categorized as an atypical somatoform disorder in the DSM-III (*American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders: DSM-III,* American Psychiatric Association, 1980), then implicitly mentioned in the text for social phobia and as an example of delusional disorder of the somatic type in DSM-IV-TR (*American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders: DSM-IV-TR,* American Psychiatric Association, 2000). Later, in view of the insufficient empirical evidence to include it as a separate diagnosis, it appeared in the DSM-5 in "Other Specified Obsessive Compulsive Disorders", a variant of "*taijin kyofusho*", under obsessive-compulsive and related disorders (OCRDs) (Van Ameringen, Patterson, & Simpson, 2014). Conversely, the International Statistical Classification of Diseases and Related Health Problems (ICD 11) has considered ORS for inclusion as a discrete diagnostic entity within OCRDs (Stein et al., 2016).

Hence, ORS is still underdiagnosed and under-treated. The clinical presentations and treatment options are varied and mixed from case to case. There are several published reports of treatment success using pharmacotherapy that include SSRIs and SSRI with antipsychotic augmentation or antipsychotics alone (Albers, Amato, & Albers, 2018; Dominguez & Puig, 1997; Michael, Boulton, & Andrews, 2014; Stein, Le Roux, Bouwer, & Van Heerden, 1998). In contrast, case reports using psychotherapy are limited (Allen-Crooks & Challacombe, 2017; Lim &

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Ajay, 2012; Martin-Pichora & Antony, 2011; Zantvoord, Vulink, & Denys, 2016) and published reports regarding ORS treatment remain scarce. Thus, specific treatment guidelines do not yet exist. Herein (from the Middle East) we report a case of an ORS patient who is showing good response to cognitive behavioral therapy with SSRIs. This report helps to add data regarding clinical features of ORS and management of similar cases which will result in a better understanding of this disorder and more accurate classification.

2. Case introduction

The patient was a 20-year-old male student in the medical field, referred to the psychiatry clinic because of excessive and persistent overvalued notions that he emitted a sweaty body odor that offended others.

His complaint began three years prior to presentation in the clinic. He stated that while he was attending a class, his friend who was sitting next to him remarked, "*someone used excessive amounts of deodorant*". His friend was looking at him and seemed upset. Because of this, the patient believes his friend was referring to him. After this event, he started taking precautions to ensure his smell was not offensive. He checked his odor regularly, showered prior to leaving home and use an excessive amount of shower gel. In the beginning, he used deodorant excessively, but with time he stopped using deodorant because he thought it was would not adequate to mask his sweaty odor. Instead, he thought deodorant worsened the odor. He admitted the fear of giving off a sweaty smell makes him anxious. He sweats profusely from his back and axillae and worries that the foul smell will bother others and hurt their impression of him.

Eventually, his anxiety was precipitated by people wrinkling their noses, coughing or touching their face, or if he found his clothes wet. These experiences reinforced his beliefs regarding his odor and made him vigilant of others behavior. To rectify his problems, he obviates any position that causes him to feel hot or sweating; these behaviors include: drinking coffee or tea, walks in the sun, and turning off the air condition (regardless of the temperature). He reported that he avoids social gatherings, collective prayers and outgoing interactions that involve any degree of proximity to others. For example, in his class he sits in the last row and leaves more than arm's length between him and his colleague beside him. He also does this with his family around dinner table. In the mosque, he attends late in order to pray in the last row (near the gate) so he can stay for a short time and leave quickly. These behaviors are coupled with bathing and changing his clothes frequently and checking his odor often. His condition worsened with time and does not improve with better weather. He remains unable to have a meaningful social life or enjoy hobbies. His academic performance declined with frequent absence and poor concentration in class. He tried many times to ignore this fixation but he could not. He was feeling depressed and was worried about his future.

He prescribed himself as: *"I am interested in details, orderliness, and perfectionism. I am pious but currently, I am a hypocrite, having a double face, unable to distinguish between right and wrong and control myself"*. His sister has been treated for OCD, she was repeating ablution and prayers. Our patient had no past or current history of medical conditions and no past psychiatric history.

During examination of the patient's mental state, he wore scrubs and had good hygiene and grooming. He was anxious, concerned about emitting an odor and avoided eye-contact. He was tearful because his problem is very distressing him. He was articulate, with coherent speech. He believed his thoughts regarding his odor were variable, and ranged between the possibility that he did not emit a sweaty body odor and being completely convinced in his belief when interpreted with perceived clues during social interactions. There were no auditory or olfactory hallucinations. No clear delusions, no suicidal thoughts or self-harm and his cognitive-state was intact.

3. Assessment

Symptoms were assessed using the standard IAPT service outcome measure, which has well-validated scales. The GAD-7 scale used to measure of anxiety and the PHQ-9 used to measure depression were used (AlHadi et al., 2017; Kroenke, Spitzer, & Williams, 2001; Spitzer, Kroenke, Williams, & Löwe, 2006). In addition, we used the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) to measure the severity of the patients OCD symptoms and the World Health Organization Quality of life-BREF (WHOQOL-BREF) to measure quality of his life prior to treatment (THE WHOQOL GROUP, 1998; WK et al., 1989). We administrated the Arabic version of the OCD questionnaire to determine the type of OCD and personality disorders scale (Aldemerdash, Ghanim, & Zainah, 2007; Momen & Abo-Hindi, 2006). At the time of treatment, we were not aware of validated measures or any useful measure specifically created for olfactory reference syndrome. However, There is an ORS questionnaire online, developed by the OCD center of Los Angeles for clinical use, but has no article for citation ("OCD Center of Los Angeles," n.d.).

The first author (consultant psychiatrist and certified psychotherapist) met the patient for the first time and made the assessment and diagnosis. The second author (psychiatry resident) conducted the CBT sessions under supervision. Signed informed consent to publish this information was obtained from the patient.

4. Case conceptualization

We used the classical Beckian model for case conceptualization. (Fig. 1) We believe that early experiences and situations had developed perfectionism schema and core beliefs in form of: "*I need to be in control*" and "*I need to be 100% sure always*". These core believes can be activated in situations like the first situation that is mentioned in Fig. 1. Also his family history of OCD may play a genetic role and make him more predisposed to OCD related disorders. The catastrophic and all or none thinking shaped the assumptions and automatic thoughts, e.g. "*I must control my sweat all the time*" and "*Taking shower before leaving home is mandatory always*". Compensatory strategies (i.e. safety behaviors) helped to maintain the unrealistic thoughts. Avoidance, repetitive checking, excessive showering and clothes changing did not give him the chance to check the reality of his thoughts regarding the smell and other related thoughts.

We believed that correcting maladaptive thoughts will help a lot in his anxiety and worry. Also, exposure (instead of avoidance and doing the safety behaviors) will make him tolerate anxiety and help him to examine his believes and find out that they are not realistic.

This conceptualization is somehow similar to OCD cases. It shares using exposure and cognitive restructuring to decrease anxiety level in patients with OCD.

The gold standard of treatment for OCD is behavioral therapy; exposure and response prevention to break the cycle of conditioning that maintains symptoms (Leahy, Holland, & McGinn, 2012). Adjunctively to ERP, cognitive therapy to modify maladaptive beliefs may increase the efficacy of standard behavioral treatment (Leahy et al., 2012). ORS shares some belief domains with OCD. For example, our patient showed a tendency to overestimate threat, perfectionism, inflated personal responsibility and intolerance of uncertainty. On the other hand there was no clear over-importance of the significance of one's thoughts and he did not have beliefs in the necessity to control one's thoughts (Obsessive Compulsive Cognitions Working Group, 2001; "Psychometric validation of the Obsessive Beliefs Questionnaire & the Interpretation of Intrusions Inventory: Part I.,", 2003). We assumed that over-estimation of threat and catastrophic thinking associated with other belief domains like perfectionism and intolerance of uncertainty, led to the anxiety and desire to control the odor always.