Treating delusional parasitosis with the antidepressant sertraline

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INTRODUCTION

Delusional parasitosis (DP) is a psychiatric disorder characterized by a persistent yet false belief of being infested with parasites. Affected individuals often seek dermatologic or infectious disease care to identify the perceived organisms. Treatment has historically relied on antipsychotics given the delusional nature of the illness, but treatment studies are very limited and to date there are no treatments approved by the US Food and Drug Administration for this condition. Here we report a case of successful treatment of DP with the antidepressant sertraline and suggest conceptualization as obsessive-compulsive disorder (OCD).

Abbreviations used:

DP: delusional parasitosis
OCD: obsessive-compulsive disorder

CASE REPORT

A man in his 60s presented to a dermatologist with 2 years of persistent bronchitis, sinusitis, and abdominal, leg, and back pain. He attributed these symptoms to worms attacking his organs and was convinced that his hairs carried multiplying worms. The patient noted that he could feel and see worms coming out of his nose, rectum, and ears. An infectious disease specialist had previously treated him with the antiparasitic agents mebendazole and praziquantel without change. All parasitic workup on samples from home was negative, showing only mucus or skin, as were endoscopy and colonoscopy. Upon physical examination, the skin on his upper and lower extremities was erythematous and cracked. Given the negative infectious workup, the patient was referred to psychiatry for presumed DP.

On referral to our psychiatric clinic, he reported debilitating impairment, spending hours daily trying to eradicate the perceived organisms, including prolonged hair removal from his furniture and vehicle. Although he had never sought mental health treatment prior to this episode, he described a history of compulsive counting and tapping rituals. While awaiting a clinic appointment, he had trialed 3 antipsychotics—risperidone, quetiapine, and olanzapine—without improvement and with intolerable sedation. Given his failure to improve with these medications and his compulsive tapping and hair removal behaviors, we started this patient on sertraline, a standard treatment for OCD. He was treated with sertraline 25 mg daily and titrated to 200 mg over a 2-month period. By 100 mg daily, he reported substantial reduction in anxiety. He became uncertain that he was infested with worms and shortened hair removal rituals to 1 hour nightly. At 200 mg daily, counting rituals had completely subsided, he developed insight into the irrational nature of his delusion, and his pain symptoms resolved. Following this, he was able to resume a job search. The patient's symptoms remain controlled on sertraline 200 mg daily since starting this treatment 1 year ago.

DISCUSSION

The prevalence and average age of onset of DP are not well known, but one population-based study

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conducted in the United States identified an incidence of 1.9 per 100,000 person-years and a mean age of 61.4 years at diagnosis.[1] Another study surveying British dermatologists estimated a 3-year prevalence of 0.499 per 100,000 persons.[2] DP tends to have a female preponderance which increases with age.[3] The condition can arise independently or it may be secondary to a medical condition, substance use, or other psychiatric disorder. Patients may experience abnormal tactile sensations, excoriation from attempts to remove the organisms, and skin irritation from the use of harsh chemicals or bug sprays. They will often collect evidence of the infestation to present to providers, which has been termed the "matchbox sign." As a result of distress, patients may experience insomnia or isolate themselves for fear of infecting friends and family. It has been hypothesized that DP exists as a continuum of symptom severity and level of insight, ranging from an overvalued idea, to a somatic obsession, to a fixed delusion.[4,5] Although DP is an uncommon condition, it presents a considerable burden to outpatient dermatology clinics as patients often request repeated appointments and workups to prove the existence of perceived parasites.

Treatment poses a further challenge as patients with DP may be reluctant to seek mental health care that implies a psychosomatic origin to their affliction. Existing treatment research has largely focused on antipsychotics. Pimozide was once the preferred therapy but has been superseded by second-generation antipsychotics due to their safer pharmacological profiles. Nonetheless, there are no randomized controlled trials of second-generation antipsychotics and existing limited studies show mixed responses.[6] Other medication classes have not been extensively evaluated, but some case reports have demonstrated varying benefit with serotonergic antidepressants.[7-9] Although individuals with less severe delusions or more insight have been proposed to be more suitable candidates for antidepressants, it remains unclear in which circumstances this medication class could be useful for DP.[4]

Given our patient's history of compulsive tapping and counting, we conceptualized his preoccupation with worms and his compulsive cleaning and eradication rituals as OCD with poor insight, per the *Diagnostic and Statistical Manual of Mental Disorders*, *Fifth Edition*, rather than the historical classification of DP as a psychotic disorder.[10] The poor to no insight specifiers, new to the *Diagnostic and Statistical Manual of Mental Disorders*, *Fifth Edition*, reflect the spectrum of delusional intensity that some OCD presentations can take on (eg, refusing food due to fear that it is contaminated with toxins). Accordingly, we treated him with a first-line medication for OCD—a selective serotonin reuptake inhibitor antidepressant, sertraline—which led to significant improvement. We recommend that providers encountering patients with DP utilize the Dimensional Obsessive-Compulsive Scale to screen for OCD.[11] The Dimensional Obsessive-Compulsive Scale is a 20-item, free self-report scale where a total score of 18 or above may help to identify clinically significant OCD symptoms. If present, providers may consider trialing selective serotonin reuptake inhibitor treatment. Further studies are needed to determine effective selective serotonin reuptake inhibitor dosing for DP, but if treated using an OCD framework, high dosing would typically be needed to provide relief. Similarly, our patient required maximum sertraline dosing for full benefit.

This case highlights sertraline as a novel treatment for DP. Screening patients who present with DP for OCD may allow for a more tailored and effective approach to care.

We thank the patient for granting permission to publish this information.

Conflicts of interest

None disclosed.

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