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Case Study

A Battle with Invisible Bugs: Treatment Response to Olanzapine in Delusional Parasitosis: A Case Series

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ABSTRACT

Delusional parasitosis is a rare psychiatric disorder characterized by a fixed false belief of infestation, often accompanied by poor insight and treatment non-adherence due to side effects of typical antipsychotics. This study evaluated the efficacy and tolerability of olanzapine in three patients diagnosed with delusional parasitosis. All patients were treated with olanzapine at a dose of 10 mg/day and followed for three months. Each patient showed significant improvement in delusional symptoms and insight, with no reported side effects and good adherence to treatment. These findings suggest that olanzapine is a safe and effective treatment option for delusional parasitosis.

Keywords: *Delusional parasitosis, Olanzapine, Late onset psychosis*

Delusional parasitosis (DP), also known as delusional infestation, psychogenic parasitosis, formication, delusional infestation, or Ekbom syndrome, is a rare psychiatric disorder which often lacks insight. Due to its peculiar presentation, its nosology has been debated, with current diagnostic and classification criteria classifying it as an unspecific disorder, which may occur along with other psychiatric disorders(1). The classical matchbox sign has been described in this condition, where patients bring the supposed insects in a matchbox to show to the clinician. Primary DP presents without any underlying cause, however, seconday DP is associated with an underlying organic cause. Etiology of the disorder is unknown and has been hypothesized to be a decreased striatal dopamine transporter (DAT)-functioning(2). Traditional treatment options are of using typical antipsychotics like Pimozide. In a study by Bhatia et. Al(3), 54% cases showed improvement with Pimozide. However, this comes with a lot of extra-pyramidal side effects, including tardive dyskinesia. This often leads to nonadherence and treatment discontinuation in patients. Second generation antipsychotics have proven to be effective in treating delusional parasitosis as well. Secong generation antipsychotics have lesser adverse effects, which hence, improve the adherence.

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Aims and Objectives

- To look for the response to olanzapine in patients with delusional parasitosis.
- To also look for the compliance and any side effects associated.

METHODOLOGY

3 patients diagnosed with delusional parasitosis were studied over a period of 6-9 months to look for the improvement with olanzapine. Weight, blood pressure were monitored at baseline and each visit. Lipid profile and blood sugar levels monitored at baseline and every 3 months. Side effects, if any, were also noted.

CASE 1:

A 58-year-old housewife was referred by the ENT department following a history of repeated visits to various emergency departments. She presented with a persistent belief that there were "bugs in her ear, which were infecting her brain," a complaint she had voiced over the past six months. Despite multiple consultations and medical evaluations, she remained adamant in her belief. No other known comorbidities. Physical examination was within normal limits. On MSE- She had an anxious affect, with delusion of parasitosis with strong conviction and acting out behaviour. No other delusions or perceptual abnormalities were noted. Insight was 1/6. She was diagnosed with delusional parasitosis and started on TAB. OLANZAPINE 5mg OD, which was increased to 10mg in the subsequent consultation. Patient had significant improvement in her symptoms within 2 months, with no significant changes in weight, blood pressure, blood sugar levels and lipid profile. No other side effects were observed. Good compliance when followed up for 6 months.

CASE 2:

A 62-year-old retired engineer presented with multiple pruritic rashes on his legs, characterized by pinkish-red excoriations.

He was brought in by his son following a referral from the Department of Dermatology. VUpon further questioning, the patient reported a persistent belief that his former colleagues had intentionally caused him to develop worm infestations in his legs. No other known comorbidities. On examination, extensive excoriations and scaling patches were noted on B/L lower limbs in different stages of healing. On MSE, patient was found to have delusion of parasitosis and delusion of persecution. Insight was 1/6. Patient was started on TAB. OLANZAPINE 5mg OD, which was subsequently increased to 15mg in 1 month. Patient showed an improvement in delusion symptoms within 3 months, with improvement in insight as well. Patient was followed up for 9 months, and showed no significant side effects or non- compliance, with no significant changes in weight, blood pressure, blood sugar levels and lipid profile.

CASE 3:

A 65-year-old retired teacher presented to the hospital with complaints of persistent itching and the appearance of red, inflamed patches on his scalp, arms, and back. He described the sensation as feeling like "insects are biting me all over." The patient reported that these symptoms had been present for the last four months, and he believed that the infestation had been caused when he stayed over at a relative’s place. Despite a thorough dermatological examination, which revealed no signs of parasitic infestation, the patient remained convinced that he was suffering from a severe bug infestation, despite the absence of any clinical evidence. He had visited several dermatologists and had used various treatments, including topical creams and over-the-counter medications, without any improvement.

The patient's wife confirmed that his belief in the infestation had become increasingly fixed, and he had begun to avoid social situations out of fear of spreading the bugs to others. No other known comorbidities. On examination, extensive excoriations noted on the scalp, arms and back in different stages of healing noted. On MSE- Delusion of parasitosis with strong conviction and acting out behaviour. No other delusions or perceptual abnormalities were noted. Insight was 1/6. Patient was started on TAB. OLANZAPINE 5mg OD, which was subsequently increased to 15mg in 1 month. Patient showed an improvement in delusion symptoms within 2 months, with improvement in insight as well. Patient was followed up for 9 months, and showed no significant side effects or non- compliance, with no significant changes in weight, blood pressure, blood sugar levels and lipid profile.

RESULTS

All 3 patients showed a significant improvement in symptoms with a dose of 10-15mg/day of olanzapine, with improvement in the symptomatology and insight about the illness. No side effects were noticed in all the patients, with good compliance to the treatment. No significant changes in weight, blood pressure and lipid profile in all the patients.

DISCUSSION

Delusional Parasitosis (DP) is also known by other terms, such as monosymptomatic hypochondriacal psychosis, psychogenic parasitosis, and Ekbom syndrome. The latter term was coined after the psychiatrist who documented the first 22 cases in 1938. Pimozide was the first widely used antipsychotic for treating DP. A meta-analysis of 1,223 case reports showed a 50% full remission rate in patients treated with pimozide, compared to a 30% remission rate in those who received earlier treatments.(4) These findings led to pimozide becoming the standard treatment for DP. However, like many older antipsychotics, pimozide is associated with several adverse effects, including parkinsonism, tardive dyskinesia, and neuroleptic malignant syndrome (characterized by fever, muscle rigidity, confusion, and arrhythmias). In contrast, newer atypical antipsychotics are generally associated with a less severe adverse effect profile, which may be due to their reduced interaction with dopamine receptors in the striatum. Olanzapine, an atypical antipsychotic, was therefore considered as an alternative to pimozide in managing certain patients.(5) In the three cases described here, treatment with olanzapine was administered at doses ranging from 5 to 15 mg per day. Olanzapine use has been associated with sedation, hyperlipidemia, weight gain, and insulin-resistant diabetes(6)(7)(8), however, none of these were reported in the cases studied. Treatment in liaison with other specialists such as dermatologists will help improve the outcome of such patients(9).

CONCLUSION

This case series suggests that olanzapine is an effective and well-tolerated treatment option for delusional parasitosis. All three patients showed significant improvement in delusional symptoms and insight within a few months of treatment. Importantly, no major side effects or metabolic disturbances were noted during the follow-up period. Compared to traditional antipsychotics like pimozide, which are often limited by extrapyramidal side effects, olanzapine offers a safer profile that may enhance treatment adherence. While these findings are promising, larger studies are needed to further establish the efficacy and safety of olanzapine in managing delusional parasitosis.

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Conflict of Interest

The author(s) declared no conflict of interest.

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