

Delusional infestation: first case in the intellectually disabled population

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Delusional infestation is a rare primary delusional disorder. Here, Drs Sharaf and Thevathasan describe a case of delusional infestation in an intellectually disabled patient, along with the patient's marked response to aripiprazole. Also apparent are the patient's presentation differences from the classically reported primary disorder.



We report what we believe to be the first described case of delusional infestation in the intellectually disabled population, along with its dramatic response to aripiprazole. Delusional infestation is a rare primary delusional disorder. Its treatment has been described using typical antipsychotics and atypical antipsychotics.¹ We also report differences to the presentation from the classically-reported primary disorder.

Case report

A 63-year-old man was referred, by his general practitioner, with a gradual deterioration in mental state which was suggestive of a psychotic illness. The patient had a mild–moderate intellectual disability yet was able to maintain a high degree of functionality in the pre-morbid state. He was able to wash, dress and feed himself. He would catch the bus from his rural home into the county town where he worked, arranging tables at a restaurant. He had maintained this job for many years.

There had been a decline over three months. The primary complaint of the patient (in terms of both intensity and chronology) was that of ‘little animals’. He would

describe these as living in his skin, particularly over his back. He believed that not only were they on him but that they were also inside and underneath his skin. He would mutter and swear to himself about how distressing this was, specifically mentioning ‘animals’ and ‘insects’. As his symptoms progressed he began to believe that he had metal rods inside his back and stomach. These were unshakable beliefs. He was noted to take a rolled-up newspaper to scratch and hit himself on the back in an attempt to relieve his symptoms. A thorough search of his bedroom and home revealed no evidence of infestation.

A physical examination was unremarkable apart from the signs of excoriation which were most marked on his trunk. Laboratory investigations including thyroid function, blood glucose and calcium levels were all within the normal range.

His symptoms had a marked effect on him and he became increasingly anxious and withdrawn. He lost his appetite and his ability to perform his activities of daily living. A significant increase in the levels of supervision was required. The degree of distraction was such that he was felt unable to safely negotiate the stairs on his own. He was no longer interested in his usual hobbies or pastimes. There was no past

psychiatric history, and his medical history showed mild asthma and successfully-treated Bowen’s disease. There was no alcohol or recreational drug history and he was not taking any benzodiazepines. There had been no preceding evidence of any cognitive decline or suggestion of any underlying dementia.

A diagnosis of primary delusional infestation or Ekbom’s syndrome was made. Aripiprazole 10mg daily was prescribed. The patient was seen again two weeks after starting the antipsychotic and showed a dramatic response. He was no longer anxious or withdrawn. He had regained his humour and interests. His appetite was improved and he would spontaneously start conversations. He did, however, still complain of ‘animals and insects’, mostly on his back. The intensity of his complaints had decreased, as had the frequency. When questioned at this stage, his feelings about his infestation were still unshakable.

As he had only been on treatment for two weeks, it was decided to continue at the same dose, and to see and examine him again in another six weeks. At the second review he was in total remission. He had no complaints regarding insects, animals or of the metal rods which he believed were in his back. He was socially active and had regained his self-confidence in

activities of daily living. He would no longer use rolled-up newspapers, and his mobility and independence with negotiating the stairs were additionally back to his pre-morbid state.

Our patient and his family were delighted with his response to treatment. No side effects of treatment were evident and he was advised to continue to take his aripiprazole. He remains under regular clinical review in the outpatients clinic.

Discussion

Delusional infestation (*dermatozoenwahn*) was classically described by Ekblom² in 1938. The term parasitosis was suggested in 1946³ and has continued to be used for some time. Delusional infestation has recently been suggested as the preferred term. In our patient, we would agree with the proposal that the term infestation⁴ be used instead of parasitosis as we would not have been able to identify a specific parasitical organism in our patient; rather, the presence of infestation with insects and animals which may not have been of a parasitical nature.

The intellectually able person suffering with delusional infestation is said to have no other aspect of their mental health affected⁵ and is able to have entirely appropriate discussions on subjects other than their infestation.

We believe that this may not be the case in the intellectually disabled population. The degree of disability (and the skill of the clinician) will affect the clarity of history which can be gained as well as the intensity of thought disorder. Non-verbal signs may be present such as the patient's use of a rolled-up newspaper to itch his back.

Our patient was severely affected by his delusions and

demonstrated other signs which may not be expected to be present in the intellectually able population. He became agitated and withdrawn, and his mobility and activities of daily living suffered. He lost his appetite and interest in his hobbies. This may suggest that the diagnosis was incorrect. The differential diagnosis should include a psychotic depression, schizophrenia or early signs of a dementing process.

Given the range of the differential diagnosis, we took the opportunity to re-take the history both from the patient and also collaterally. Both sources confirmed that the first complaints were that of the feelings of insects and animals in his skin. Prior to this there had been no affective symptoms and no cognitive deterioration noted. The anxiety, social isolation and functional deterioration all appeared after the delusions had reached a significant level, rather than the other way round. With these considerations, we felt that our diagnosis was likely to be that of a primary delusional disorder rather than any of the differential possibilities. Furthermore, there were no first rank symptoms, there was a dramatic response to treatment with an antipsychotic, no antidepressant drugs were administered, neither was any psychotherapy offered.

Our diagnosis was made clinically. Simple haematological and biochemical analysis was made but no further investigations or evaluations were done. We felt that the rapid functional decline was not in keeping with a dementing process and hence elected not to compare pre-morbid IQ estimate to the pre-treatment IQ. There would be strong arguments to arrange cerebral imaging and examination of an electroencephalograph (EEG). However, given the degree of

anxiety and agitation in our patient, we felt that this would be impossible to arrange without the added risks of sedation or even general anaesthesia, both of which would have rendered the EEG inaccurate. There were no physical symptoms or clinical examination findings to suggest raised intracranial pressure and hence we decided to treat on our clinical findings. We feel this is one of the challenges of treating morbidity of all types in the intellectually disabled population. They are a vulnerable group of people and care must be taken not to exclude them from the high standard of care that the intellectually able population enjoy. At the same time, we must be mindful that our investigations have a careful analysis of the risk:benefit ratio.

There was a short course of the illness with a three-month history. This is significantly shorter than the mean of three years previously reported.⁶ The reasons for the short duration of illness prior to diagnosis are potentially multi-factorial and possibly unique to the learning disabled population. Unlike the able population, our patient would not have been able to argue rationally the cause for an infestation. He would not have been in the position to visit dermatologists, entomologists or to engage pest control services. Furthermore, the secondary change in his behaviour and loss of activities of daily living prompted an urgent referral to a psychiatrist.

Historically, treatment of delusional infestation has been multimodal. Psychotherapy,⁷ ECT⁸ and surgery⁹ have been used with claims of success. This is mainly in cases of secondary delusional infestation where the primary disorder was that of a depressive disorder. Despite the absence of randomised

controlled trials, antipsychotics have been the mainstay of treatment. Both typicals and atypicals have been used with the most promising results seen with pimozide. Trifluoperazine, haloperidol, fluphenazine and flupenthixol have also been used. Of the atypicals, risperidone and olanzapine have shown the best results.¹

We used aripiprazole to treat our patient. The literature shows eight cases of aripiprazole used to treat delusional infestation.^{10–16} None of the cases involved a patient with a learning disability. Aripiprazole acts as a partial agonist at dopamine 2 receptors,¹⁷ as opposed to the more traditional antagonism of dopamine which is seen in other antipsychotics. It is thus less likely to cause extrapyramidal side effects. Side effects can be worse in the intellectually disabled population,¹⁸ and hence we felt that this would be the ideal drug. We doubt whether the different effect on dopamine receptors will have affected the recovery, but feel that it will have aided in treatment compliance. Aripiprazole has effects on serotonin receptors¹⁷ and these may have been of relevance. The partial agonism at the serotonin-1A receptor and the blockade of the serotonin 7 and 2C receptors may well have caused some improvement in our patient's affective symptoms. There are no randomised controlled trials comparing aripiprazole to other antipsychotics in delusional infestation. The rarity of the condition and the reluctance of most sufferers to engage with psychiatrists will make it a difficult area to conduct robust trials. That said, we believe that aripiprazole should be considered when treating delusional infestation whether intellectual disability is present or not.

This is the first case in the literature of delusional infestation in the intellectually disabled population. Mental health disorders are more common in the intellectually disabled population, and in particular psychotic disorders have a point prevalence of 4.4%.¹⁹ It could then be assumed that the prevalence of delusional infestation would also be higher. (There are no data to corroborate this assumption.)

Thus this first report of delusional infestation in the intellectually disabled population is long overdue. It is unclear why this is but communication difficulties, access to health care, comorbidities and higher rates of genuine infestation may offer some explanation for this.

We believe that the clinical picture may vary from the classical description and despite its rarity should always be considered in an intellectually disabled person who complains of pruritus, excoriation, irritation or agitation where no other cause can be found.

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Declaration of interests

There are no conflicts of interest declared.

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