

CASE REPORT

Ekbom's Syndrome: Worms of the Mind

¹Arpit Jaiswal, ²Saurabh Jaiswal, ³Rohit K Srivastava

ABSTRACT

Delusional parasitosis (DP), also known as Ekbom syndrome, is a rare, monosymptomatic psychosis where the person has an unshakable belief (i.e., delusion) of being infested with parasites. A detailed activity of the offending parasite like crawling, biting, burrowing is often given by the patients. It is commonly observed among patients over the age of 50. International Classification of Diseases (ICD) 10th revision defines this disorder as "delusional disorder." We are presenting a case report of a patient suffering from DP, who was successfully treated on atypical antipsychotic olanzapine, together with psychoeducation and counseling.

Keywords: Delusional disorder, Delusional parasitosis, Dopamine antagonists, Ekbom's syndrome.

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INTRODUCTION

Delusional parasitosis (DP), or Ekbom syndrome, is defined as a persistent delusional disorder where there is a fixed, unshakeable, and mistaken belief by the patient that he is infested with parasites.¹ Patients who are suffering from this syndrome claim to feel sensation of bugs crawling under skin and also can visualize them though nobody else can see it. Thiberge described the condition and gave the term acarophobia in 1894; Ekbom described about the syndrome in 1938 and was named after him. Various names have been given in the past like dermatophobia, parasitophobic neurodermatitis, parasitophobia, or entomophobia.² These terms with "phobia" attached are a misnomer because in classic phobia, the patients are usually aware of the fact that their fearful reactions are both excessive irrational.

Delusional disorder constitutes 1 to 3% of all psychiatric admissions. Ekbom syndrome is predominantly seen during middle to late adulthood, usually occurring in

persons who are married and who belong to lower socioeconomic status.^{3,4} The symptoms in the beginning can be aggressive or gradually progressive and is often accompanied with pruritis, and sensation of crawling within the skin, formication or tactile hallucination, which unleashes the sensation of parasitism. Skin lesions are frequent in the form of bruises, nodular pruritus, ulcers and scars, localized, symmetrical, and are produced by the patient in an attempt to extract the parasite from the skin. Patients extract the parasites, count them repetitively, and tell in detail about the morphology, lifecycle, and habits of these offending parasites as well as their ways to get rid of them. Many patients collect pieces of skin, hair, paper, and other specimen, claiming such scrapes to be parasites, a phenomenon characteristic of this syndrome commonly called as "box of matches signal."^{5,6}

Delusional parasitosis tends to be under-diagnosed as they present to dermatologist and physicians more readily than to psychiatrists.⁷ Early detection and referral to a psychiatrist requires a proper and a detailed history. Major depression and schizophrenia forms an important differential diagnosis of Ekbom syndrome, since well-systematized delusions can be seen in these disorders. Psychiatric evaluation in doubtful cases avoids unnecessary investigations, invasive procedures, and financial burden. Pimozide, a highly specific dopamine blocker, has shown promising results and has been the most studied drug for the treatment of DP. We are presenting a case report of patient with DP who went to physicians and dermatologist before finally getting referred to psychiatrist. The index patient was successfully treated on atypical antipsychotic olanzapine, together with psychoeducation and counseling.

CASE REPORT

A 55-year-old male was apparently asymptomatic 6 months back when in the background of vague sensation of something crawling under his skin and something in between the creases of his clothes, he developed a sudden onset belief that he has been infested by worms that crawl under his skin and as well as throughout his body. Despite repeated explanations and reasons given by the family members, he did not listen to them and had no logical ground for holding this belief with such conviction. He started pinching his skins to get hold of those worms and dusting the clothes. He believed that these worms were biting him all over his body and

^{1,2}Postgraduate Resident (3rd Year), ³Professor

¹⁻³Department of Psychiatry, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India

Corresponding Author: Arpit Jaiswal, Postgraduate Resident (3rd Year), Department of Psychiatry, Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, India, e-mail: arpitjaiswal8@gmail.com

ultimately will enter deep inside his body. He believed that these worms are very small in size and numerous in numbers.

He consulted a physician where routine hemogram was unremarkable and he was prescribed Albendazole and antiallergens to no relief. He was counseled that he does not have an infestation and his complaints had no physical explanation; however, he held on to his belief regardless. He had a marked decrease in appetite, remained anxious, and had impairment in sleep. His treating physician noted him to be withdrawn and dull for which psychiatric referral was done. There was no significant family history or past history of any psychiatric, neurological, endocrinal, chronic, or allergic illness.

On examining the skin, there were prominent itch marks and marks of excoriations on both the limbs and on other body parts. Mental status examination revealed anxious and depressed affect, delusion of parasitosis, tactile hallucination, impaired insight, and reduced bio-drives in a clear sensorium, delusional, and hallucinatory behavior of picking the skin in an attempt to catch the worm, secondary depressive cognition, insomnia, and reduced appetite.

Relevant investigations were done, which included routine hemogram, urine analysis, blood sugar, liver function test, electroencephalogram, and magnetic resonance imaging, but the findings revealed no significant abnormality. He was subsequently diagnosed as a case of persistent delusional disorder (F.22) as per International Classification of Disease 10 (ICD-10-DCR). The patient was psychoeducated and counseled and his pharmacological treatment was started with second-generation antipsychotic olanzapine 10 mg 1 HS and benzodiazepine clonazepam 0.50 mg 1 BD on OPD basis, with a 2-week follow-up. On follow-up, repeat multiscale entropy was done on the patient, which revealed that the patient is having lesser psychological distress and better sleep with lesser impairments in daily activities. The patient was continued on olanzapine 10 mg/day, the benzodiazepine was gradually tapered off, and the patient was seen on fortnightly basis. During the visits the patient was psychoeducated and levels of resolution of his delusions were assessed. Within 3 months, the patient reportedly had 70 to 80% relief in symptoms, so the patient was asked to continue on the same dose with regular follow-ups.

DISCUSSION

Ekbom syndrome, which was previously known as monosymptomatic hypochondriacal psychosis, is characterized

by single delusional system, which is false, fixed, unshakable belief with impaired reality. Subtypes of delusional disorder with which the patient can present are: Somatic type, jealousy, poverty, reference, persecutory, erotomania, nihilistic, grandiose, of being controlled.⁸ Somatic type can be of following types: Body odor (halitosis) infestations, mis-shapeness (dysmorphic), tumor, blockade of intestines, etc.⁹ Various names have been given to this disorder, but it should always be remembered that these illnesses are real and are challenging to our diagnostic and therapeutic skills.¹⁰ Their attempts for self-treatment include repeated washing, checking, and cleaning; excoriation of skin with needles, knives, or fingernails; discarding household items; and excessive use of insect repellents or insecticides.

The differential diagnosis of DP includes a number of medical, neurological, and psychiatric disorders. The effects of certain drugs can mimic a delusion; especially cocaine and amphetamines may produce a tactile hallucination referred to as "cocaine bugs" or "Magnan's sign." Patients with severe alcohol withdrawal may experience visual hallucinations of insects or tactile hallucinations that bugs are crawling over their skin (formication).

Pimozide, a specific dopamine blocker, which has been extensively studied for this disorder, appears to give dramatic results in the doses of 4 to 12 mg/day. In this study, we have given the patient an atypical antipsychotic olanzapine in the dose of 10 mg/day, and the results were promising and comparable to pimozide. The incidence of Ekbom's syndrome is very low, and it can be diagnosed by medical practitioners only if it is kept at the back of the mind while listening the chief complaints of the patient, which are often quite vague, ranging from itching to abnormal hallucinatory behavior. In general practice, often the patients are managed only symptomatically for a long time before being referred to a specialist. This leads to substantial amount of discomfort and mental stress to the patient, which can sometimes result in emotional distress and even negative cognitions.

CONCLUSION

Cases of Ekbom's syndrome are quite uncommon for general health practitioners, which lead to overlooking of this syndrome, but it can be diagnosed easily by a detailed history, and by ruling out the differential diagnoses by physical examination, and relevant investigations, if the diagnosis is kept at the back of the mind. Awareness about this syndrome is important to all health practitioners, including general medical practitioners and dermatologists, to rationalize the line of management and the ultimate clinical outcome.

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