



Primary Delusional Infestation in a Middle Aged Woman in Nigeria- a Case Report

Duwap Milepdwak Makput

Department of Psychiatry/Mental Health, Federal University of Health Sciences Azare, Bauchi State, Nigeria.

DOI: <https://doi.org/10.68050/JAMS.2026.472>

Received: 14 Sept 2026; Accepted: 15 Sept 2026; Published: 18 September 2026

ABSTRACT

A Case report of a middle aged divorced woman is presented here. She complained of intense itching on her skin which she strongly believed is due to infestation by insects. She has gone from one doctor to another seeking for solution. She has also scratched her skin with sharp objects in response to the perceived itching sensation. Clinical and laboratory investigations for possible causes all yielded negative results. There were no history suggestive of cocaine or alcohol use, no history suggestive of stroke, head injury or thyroid disease. Her mental functioning was otherwise normal except for this strongly held belief about being infested by insects.

Laboratory investigations i.e HIV screening, VDRL, Manteaux test, Fasting blood sugar were all negative.

Conclusion. This conforms with a rare case of primary delusional infestation.

Key words: Delusional, infestation, Woman, Nigeria.

INTRODUCTION

Delusional infestation which is also known as Ekbom syndrome, or delusional parasitosis is an infrequent psychotic disorder that is marked by a very intense and strongly unshakeable false belief that there is a parasitic infestation, usually occurring on or beneath the skin even though there is no medical proof to explain it¹. The syndrome is named after Karl Ekbom, a Swedish neurologist who first described the condition in the late 1930s.

There are two forms of delusions of infestation: primary and secondary². The primary form of the illness is a psychiatric disorder where the delusions of parasitic infection are the only symptom present. The secondary variety is when the delusions of parasitosis occur alongside another psychiatric disorder such as schizophrenia or secondary to drug abuse or medical illness³.

Delusional infestation which is most commonly found in middle-aged isolated women is very rare, accounting for only about 5% of psychiatric cases worldwide⁴. Individuals with this disorder often experience real and distressing tactile or visual hallucinations of crawling bugs, worms, or any parasites underneath their skin. During a consultation, these individuals are capable of giving an intricate description of their condition⁵.

They intensively hold their belief and try to convince their doctors that real parasitic infection is going on in their skin⁶. Most of them appear to have secondary skin lesions such as excoriations and scars.

Often these patients only rely on over the counter medication to help relieve their skin condition, such as an antihistamine or any oil, lotion, or soap preparations that are thought to be able to help their skin condition⁷. Temporary improvement reinforces their false belief, making it more challenging for the clinician to help them. Most patients even stop complying with their clinician's advice and think that they are being labeled as having a mental illness.



This condition is characterized by the presence of a delusional idea in which the body, mainly the skin, is infested by small pathogens in the absence of any medical evidence.⁸⁻¹⁰ Patients show self-destructive behaviors in effort to get rid of skin pathogens, generating excoriations, ulcerations, and secondary infections.^{11,12} Patients usually seek help from their general practitioner or dermatologist and as a last resort from psychiatrists.¹³

Apart from a primary form, delusional infestation may be associated with other psychiatric disorders (secondary functional forms), as well as medical diseases or substance abuse (secondary organic forms).¹⁴

CASE REPORT

Mrs Z. A, a 49-year-old divorced woman was brought to a private medical facility in Jos by a relative for a psychiatric consultation. She refused to be taken to the Psychiatry clinic in the University Teaching hospital and relatives had to arrange to see the psychiatrist in a private medical facility in town. She reported intense itching and strange sensations under her skin for a "long time" which she estimated to be about eight months. The itching affects most parts of her body with severe scratching. Previously, a doctor prescribed some antibiotics for infected lesions. She has also began experiencing anxiety and poor sleep for the past five months. She strongly believe that there is a real parasitic infestation underneath her skin for which she saw a dermatologist four months ago who said he did not find any evidence of skin infestation but prescribed some medications to soothe her symptoms. Three months ago, she was taken to a private hospital where she was evaluated by a psychiatrist.

During the assessment, the patient reported feeling that insects were crawling under her skin. She previously used her finger nails, bathing sponge, spoon and recently "iron sponge" to scratch them off due to the intense itching sensation. She has sought help from various sources including herbalists and spiritualists with minimal success. Patient denied any history of head injury nor use of opiate medication. There was also no history of cocaine and alcohol use. She does not use any psychoactive substance except for occasional chewing of cola nut. She is the third of 6 full siblings in a polygamous family. She divorced from her husband with whom she has 4 children. She is currently unemployed and lives with her uncle in their family house. She is not a known hypertensive nor diabetic. There were no history suggestive of stroke or any neurological disorder. Patient described herself as a very religious person with no history of multiple sexual partners. On physical examination, she was anxious and worried about her condition. There were no signs of infestation. She had skin excoriations

Urine toxicology screening was negative for cocaine, alcohol and other drugs. Fasting blood sugar (result 4.9mmol/L) was done to rule out diabetes mellitus, she had no clinical features of thyroid disease, she could not do serum T₃, T₄, TSH because of financial reasons. HIV screening, Manteaux test and VDRL were all negative. Despite all negative findings on history and clinical examination, she still believes she is infested by insects.

On her second visit to the psychiatrist two months ago, she commenced cognitive behavioural therapy, a form of psychotherapy where those believes are addressed. There has been some appreciable response as her anxiety has subsided. She has had several sessions of psychotherapy. Initially she refused antipsychotic medications and does not want any mention of such drugs. However, recently she is no longer angry about discussing the possibility of her taking antipsychotic medications although she is yet to accept such medications.

DISCUSSION

Using ICD-11, this patient fulfilled the criteria for a diagnosis of a delusional disorder. Delusional parasitosis may start with a cutaneous sensorial misinterpretation that turns into a tactile hallucination and consolidates into a delusional idea.¹⁵

Aetiology

It has been proposed that a dopaminergic deregulation contributes to the onset of the delusional condition in



primary forms.¹⁶ Secondary forms of delusional infestation are due to a consumption of dopamine transporter inhibitors (cocaine, pemoline, bupropion, amphetamines) or to secondary dysfunctions of the dopamine transporter (traumatic brain injury, Parkinson disease, schizophrenia).¹⁷⁻¹⁹

In the past, there was not any known established explanation on how this disorder develops, but currently, it is hypothesized that impaired striatal dopamine transporter (DAT) that corresponds to increased dopamine level could potentially induce this disorder. Investigations using drugs that inhibit dopamine reuptake, such as amphetamines, methylphenidate, and cocaine, have shown to induce symptoms of delusion²⁰

Most commonly, delusional infestation present secondary to a primary psychiatric disorder. These disorders include schizophrenia, bipolar disorder, depression, anxiety, obsessive-compulsive disorder, and illness anxiety disorder.

Secondary delusions of infestation can have several medical causes²¹. These causes include: Medical illnesses such as hyperthyroidism, B12, and folate deficiencies, neuropathy, and diabetes, Neurologic conditions such as dementia, stroke, multiple sclerosis, encephalitis, meningitis, and post-surgical complications from neurosurgery. It may also be due to substance abuse including methamphetamine use, alcohol withdrawal, and acute cocaine use (described as "cocaine bugs"), infectious causes such as HIV, tuberculosis, leprosy, and syphilis and medication side effects from medications such as topiramate, ciprofloxacin, amantadine, steroids, ketoconazole, and phenelzine. _

Epidemiology

Delusional **infestation** is a rare condition. According to a meta-analysis, the syndrome is more common among women (two-thirds women, one-third men), and more common in those over the age of 40. This disease is relatively uncommon²². Psychiatrists and dermatologists rarely see the disorder as patients do not believe that their symptoms are a delusion, but instead based in reality.

The illness onset occurs between age 55 and 68 years,²³ although it may sometimes occur earlier especially in adolescents and young adults after abuse of substances such as cocaine or amphetamines.^{24,25}

Clinical presentation

The most common symptoms typically presented by patients include pruritus, rashes, stinging, or formication with symptoms lasting six months or longer and having no physical findings present. Patients may have had previous trials of topical dermatologic medications and/or antibiotics in attempts to treat the illness

Patients may present with excoriations or scars from previous attempts that patients undertook to remove "organisms" using various objects or their own fingernails.

This patient exhibited delusion in which she strongly believe that there is real parasitic infestation underneath her skin. A delusional disorder is characterized by the development of a delusion or set of related delusions that persist for at least 3 months (usually much longer), which occur in the absence of a Depressive, Manic, or Mixed mood episode. Other characteristic symptoms of Schizophrenia (e.g., persistent auditory hallucinations, disorganized thinking, and negative symptoms) are not present, although various forms of perceptual disturbances (e.g., hallucinations, illusions, and misidentifications of persons) thematically related to the delusion are still consistent with the diagnosis.

Apart from actions and attitudes directly related to the delusion or delusional system, affect, speech, and behavior are typically unaffected²⁶. The symptoms are not a manifestation of another disorder or disease that is not classified under mental, behavioral or neurodevelopmental disorders (e.g., a brain tumor) and are not due to the effect of a substance or medication on the central nervous system (e.g., corticosteroids), including withdrawal effects (e.g., alcohol withdrawal)".²⁷.

This syndrome is known to present as a primary or secondary disorder. Primary delusional infestation refers



to the presence of delusion of parasitic infestation without any psychiatric or organic disorder (which is in line with our patient's presentation). The possibility of other differential diagnoses were ruled out by ordering blood tests for cocaine and alcohol use which were negative. This patients' symptoms and clinical findings conform to a primary delusional parasitosis.

Examination

There was no significant findings on clinical examination except for signs and symptoms related to her delusion. Laboratory tests were negative for substance use. Evaluation should initially focus on ruling out an organic parasitic or organism infection. Practitioners should also pay attention to the possibility of bed bugs being present and causing symptoms. Routine laboratory testing may include a complete blood count with an emphasis on increased eosinophils. It is also essential to evaluate for secondary causes of the patient's symptoms; this may include an evaluation for thyroid disorders, vitamin deficiencies, neurologic disorders, and ruling out infectious causes such as HIV, tuberculosis, syphilis, and leprosy²⁸

Diagnosis

ICD-11 criteria for delusional disorder (6A24)

Delusional disorder is characterized by the development of a delusion or a set of related delusions typically lasting three months or longer in the absence of a depressive, manic or mixed mood episode. The delusions are variable in content across individuals but typically stable within an individual, although they may evolve over time. Other characteristic symptoms of schizophrenia (i.e clear and persistent hallucinations, negative symptoms, disorganized thinking, experience of external influence, passivity or control) are not present. Perceptual disturbances related to the delusion are consistent with the diagnosis. Apart from actions and attitude directly related to the delusion or delusional system, affect, speech and behavior are typically unaffected. The symptoms are not a manifestation of another medical condition (eg a brain tumor) and are not due to the effect of a substance or medication on the central nervous system including withdrawal effects e.g alcohol withdrawal.

This patient meets the criteria for a diagnosis of a delusional disorder, in this case, a delusional infestation.

Treatment

Once the clinician has made a diagnosis of delusional infestation, the primary consideration in treatment is to build a strong rapport with the patient and maintain a good relationship. Patients can feel frustrated and disrespected and untrusting of practitioners who do not take the time to listen to their complaints or symptoms, which can lead to noncompliance with follow up care and visiting alternative practitioners for second opinions. Practitioners should focus on being objective and acknowledging the patient's symptoms, not dismissing their symptoms or feelings, and understanding the effect this can have on their daily life. Agreeing or disagreeing with the patient overtly in the office about their symptoms can be a difficult decision to make. The most accepted approach involves taking a neutral approach by stating that there are no organisms visible to the practitioner at this time

It is imperative for practitioners not to dismiss patient complaints, but at the same time being careful not to perpetuate the delusion that can further bolster and strengthen it making treatment more difficult.

There is no consensus of antipsychotic dosage used to treat this condition, but literature showed that Risperidone is the most commonly used antipsychotics for DP ²⁹.

Olanzapine, on the other hand, is not recommended as first-line therapy; as an alternative, aripiprazole can be used, as it exerts very little side effect in metabolic syndrome and weight gain³⁰.

Antipsychotic treatments are recommended.³¹ Risperidone (1–8 mg/d) and sometimes olanzapine (5–10 mg/d) are mostly used with positive outcomes^{32,33}. Secondary delusional infestation treatment may also be based on



the resolution of the underlying comorbid disease or substance abuse.^{34,35} An adjuvant psychological approach, mainly cognitive-behavioral therapy, is also recommended.³⁶

CONCLUSION AND RECOMMENDATIONS

This is a rare case of delusional infestation. Initiation of psychiatric therapy

is quite challenging, as patients often refuse this due to stigmatization and their firm belief that instead of a psychiatric illness, they actually have a parasitic infection. A multidisciplinary approach and strong patient-therapist relationship are a necessity in treating this type of patient.

Primary care providers and dermatologists should involve mental health care professionals in the assessment of such patients if their come across any. With appropriate treatments, a good prognosis with remission has been reported in up to 75% of cases; however, cases of comorbid organic disease have shown poor outcomes.³⁷

REFERENCES

1. Hinkle CN. Ekbom syndrome: The challenge of “invisible bug” infestations. *Annu Rev Entomol*. 2010;55:77-94. <https://doi.org/10.1146/annurev.ento.54.110807.090514> PMID:19961324.
2. Musalek M, Bach M, Passweg V, Jaeger S. The position of delusional parasitosis in psychiatric nosology and classification. *Psychopathology*. 1990;23(2):115-24.
3. Freinhar JP. Delusions of parasitosis. *Psychosomatics*. 1984 Jan;25(1):47-9, 53.
4. Prakash J, Shasikumar R, Bhat SP, Srivastava K, Nath S, Rajendran A. Delusional parasitosis: Worms of the mind. *Ind Psychiatry J*. 2012;21(1):72-4. <https://dx.doi.org/10.4103%2F0972-6748.110958> . PMID:23766584.
5. Bellanger PA, Crouzet J, Boussard M, Grenouillet F, Sechter D, Capellier G, et al. Ectoparasitosis or Ekbom syndrome? *Can Fam Physician*. 2009;55(11):1089-92. PMID:19910594.
6. Mumcuoglu YK, Leibovici V, Reuveni I, Bonne O. Delusional parasitosis: Diagnosis and treatment. *Isr Med Assoc J*. 2020;20(7):456-60. PMID:30109800.
7. Reich A, Kwiatkowska D, Pacan P. Delusions of parasitosis: An update. *Dermatol Ther*. 2019;9:631-8.
8. Torales J. Delusional Infestations. In: Bhugra D, Malhi G, eds. *Troublesome Disguises: Managing Challenging Disorders in Psychiatry*. 2nd ed. London: Wiley Blackwell; 2015:252–261.
9. Koo J, Lebwohl A. Psychodermatology: the mind and skin connection. *Am Fam Physician*. 2001;64(11):1873–1878.
10. Heller MM, Wong JW, Lee ES, et al. Delusional infestations: clinical presentation, diagnosis and treatment. *Int J Dermatol*. 2013;52(7):775–783.
11. Torales J, García O, Barrios I, et al. Delusional infestation: clinical presentations, diagnosis, and management. *J Cosmet Dermatol*. 2020;19(12):3183–3188.
12. Torales J, Arce, A, Bolla L, et al. Delirio parasitario dermatozoico: reporte de un caso [Dermatozoic parasitic delirium: a case report]. *An Fac Cienc Med (Asuncion)*. 2011;44(2):81–87.
13. González L, Torales J, Arce A, et al. Síndrome de Ekbom. A propósito de un caso [Ekbom syndrome: a case report]. *Act Terap Dermatol*. 2010;33:140–145.
14. Vulink NC. Delusional infestation: state of the art. *Acta Derm Venereol*. 2016;96(217):58–63.
15. Al-Imam AML. A systematic literature review on delusional parasitosis. *J Dermatol Surg*. 2016;20(1):5–14.
16. Huber M, Karner M, Kirchler E, et al. Striatal lesions in delusional parasitosis revealed by magnetic resonance imaging. *Prog Neuropsychopharmacol Biol Psychiatry*. 2008;32(8):1967–1971.
17. Millard LG, Millard J. Psychocutaneous disorders. In: Burns T, Breathnach S, Cox N, et al, eds. *Rook's Textbook of Dermatology*. 8th ed. Oxford: Wiley-Blackwell; 2010:3281–3284.
18. Huber M, Kirchler E, Karner M, et al. Delusional parasitosis and the dopamine transporter. a new insight of etiology? *Med Hypotheses*. 2007;68(6):1351–1358.
19. Reich A, Kwiatkowska D, Pacan P. Delusions of parasitosis: an update. *Dermatol Ther (Heidelb)*. 2019;9(4):631–638.



20. Huber M, Kirchler E, Karner M, et al. Delusional parasitosis and the dopamine transporter. a new insight of etiology? *Med Hypotheses*. 2007;68(6):1351–1358.
21. Driscoll MS, Rothe MJ, Grant-Kels JM, Hale MS. Delusional parasitosis: a dermatologic, psychiatric, and pharmacologic approach. *J Am Acad Dermatol*. 1993 Dec;29(6):1023–33.
22. Lyell A. The Michelson Lecture. Delusions of parasitosis. *Br J Dermatol*. 1983 Apr;108(4):485–99
23. González L, Torales J, Arce A, et al. Síndrome de Ekbom. A propósito de un caso [Ekbom syndrome: A case report. *Act Terap Dermatol*. 2010;33:140–145.
24. Elliott A, Mahmood T, Smalligan RD. Cocaine bugs: a case report of cocaine-induced delusions of parasitosis. *Am J Addict*. 2012;21(2):180–181 new ref 20.
25. Fisher AH, Stanciu CN. Amphetamine-induced delusional infestation. *Am J Psychiatry Resid J*. 2017;12(12):12–13.
26. Duwap.M.Makput, Christopher Piwuna, Abba Wakil; Persistent delusional disorder. A case report; 2015. Highland Medical Research Journal 15 (2) 102-104.
27. World Health Organization WHO,2019. ICD -11 classification of mental and behavioural disorders. World Health Organization.
28. Bhatia MS, Jagawat T, Choudhary S. Delusional parasitosis: a clinical profile. *Int J Psychiatry Med*. 2000;30(1):83–91
29. Freudenmann RW, Lepping P. Second-generation antipsychotics in primary and secondary delusional parasitosis: outcome and efficacy. *J Clin Psychopharmacol*. 2008;28(5):500–508.
30. Jalali Roudsari M, Chun J, Manschreck TC. Current treatments for delusional disorder. *Curr Treat Options Psychiatry*. 2015;2(2):151–167.
31. Torales J, García O, Barrios I, et al. Delusional infestation: clinical presentations, diagnosis, and management. *J Cosmet Dermatol*. 2020;19(12):3183–3188.
32. Freudenmann RW, Lepping P. Second-generation antipsychotics in primary and secondary delusional parasitosis: outcome and efficacy. *J Clin Psychopharmacol*. 2008;28(5):500–508.
33. Torales J, Melgarejo O, González I, et al. Psychopharmacology in dermatology: treatment of primary psychiatric conditions in dermatology. *Dermatol Ther (Heidelb)*. 2020;33(4):e13557.
34. Torales J, Melgarejo O, González I, et al. Psychopharmacology in dermatology: treatment of primary psychiatric conditions in dermatology. *Dermatol Ther (Heidelb)*. 2020;33(4):e13557.
35. Campbell EH, Elston DM, Hawthorne JD, et al. Diagnosis and management of delusional parasitosis. *J Am Acad Dermatol*. 2019;80(5):1428–1434.
36. Jalali Roudsari M, Chun J, Manschreck TC. Current treatments for delusional disorder. *Curr Treat Options Psychiatry*. 2015;2(2):151–167.
37. Torales J. Delusional Infestations. In: Bhugra D, Malhi G, eds. *Troublesome Disguises: Managing Challenging Disorders in Psychiatry*. 2nd ed. London: Wiley Blackwell; 2015:252–261