

A Chinese Adolescent with Delusional Infestation

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Abstract

Delusional infestation is a psychiatric disorder characterised by tactile hallucinations and the delusion of infestation. Being unshakably convinced of the infestation, patients usually seek help from dermatologists instead of psychiatrists, although psychopharmacotherapy is effective for most patients. This report describes a 15-year-old Chinese adolescent presenting with delusional infestation within the context of a depressive illness. She is the youngest patient to be reported.

Key words: Adolescent, Female, Psychotic disorders, Schizophrenia, paranoid

Introduction

Delusional infestation (DI),¹ also referred to as delusional parasitosis² or Ekblom's syndrome,² is a psychiatric disorder characterised by tactile hallucinations and delusion of infestation. Patients feel the presence of tiny living creatures (insects, mites, ticks, maggots, worms, bugs, lice vermin, or parasites) on the surface of or inside the skin and/or the mucous membranes and/or in body cavities and have the unshakeable belief of infestation in the absence of any objective evidence. For most patients, the infestation is located in the skin or on the skin surface. When the infestation occupies the inside of the body, the term enterozoic delusion is used. Often, the 2 forms of delusion are combined.

Patients tirelessly try to get rid of the parasites, occasionally employing drastic methods such as bathing in disinfectants, shaving off all body hair, or changing their place of residence. The fight against the infestations takes centre stage in their lives. Being unshakably convinced of the infestation, patients usually seek help from dermatologists and sanitation and public health officials, and rarely receive psychiatric attention, although psychopharmacotherapy brings varying degrees of relief for the majority of patients.²⁻⁴ The rate of full remission has increased to 51.9% in the psychopharmacological

era, from 33.9% before modern pharmacotherapy was available.⁴

DI is more common in middle-aged and elderly people and is approximately 2- to 3-fold more frequent among women than men.^{2,4-7} A recent meta-analysis of 1223 reported patients found the mean age of onset was 58.0 ± 13.8 years for women and 54.8 ± 15.7 years for men.⁴ Being single, divorced, widowed, or suffering other major losses; living in social isolation; and having low educational level seem to be significant risk factors.^{4,7,8} DI rarely occurs in young people,^{2,4} with the youngest reported age of onset being 16 years.⁸

The overwhelming majority of reports are for Caucasian patients, although DI is increasingly frequently recognised in Asian, including Chinese, patients.⁹⁻¹³

This report is of a young Chinese girl who had DI, starting when she was 15 years old. She was diagnosed with a depressive illness followed by a brief psychotic disorder.

Case Report

A 16-year-old girl was referred for psychiatric evaluation due to having been emotionally unstable for 1 year. Up to the age of 5 years, the patient lived with her family in a wooden hut where she was frequently bitten by mosquitoes. Her mother had been treated for schizophrenia for approximately 10 years and was receiving monthly depot injection, the dose of which was not known. The patient had never engaged in substance abuse and was described as a sensitive and sentimental girl with few friends.

She had been socially withdrawn since the age of 15 years as she had difficulty in getting along with her classmates. She was annoyed by being gossiped about for her relationship with a male classmate. She was also distressed by the deterioration of her mother's mental state at that time.

Gradually, she became depressed and irritable, with frequent crying spells and temper tantrums. One night, when she was sleeping with her mouth wide open, she had the sensation of something entering her mouth and sticking onto

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Submitted: 14 May 2003; **Accepted:** 17 February 2004

the buccal mucosa. She was puzzled and unsuccessfully tried to get rid of it by drinking plenty of water. She insisted that it was a large group of ‘bugs’. She felt that they were crawling under her skin and everywhere inside her body, including in her nose, eyeballs, limbs, and abdomen. The most affected parts were the ears, scalp, and brain. She could hear and feel the ‘bugs’ crawling inside her ears. At times she saw them coming out from her ears and nose and appearing in the bathtub when she was bathing. She had tried to plug her ears with cotton wool in order to asphyxiate the ‘bugs’ and prevent them from coming out. In addition, she attempted to wash them away by bathing and washing her hair more frequently. She reported that the ‘bugs’ were unidentifiable, grey or black, and of various sizes, and that some could fly while some could not. She thought that some of them were mosquitoes. She had picked the ‘bugs’ out of her ears and shown them to her mother. She complained of earache and headache due to their presence inside the ears and brain, and alleviated the pain by sleeping.

The patient twice consulted ear, nose, and throat (ENT) surgeons for the presumed parasitic infestation in the ears and her family doctor for the headache. She was highly indignant and distressed when she was told of the normal findings. She was adamant about the infestation despite repeated reassurance from her father. She displayed fear of contaminating others and felt ashamed of being infested. She had no itchiness or self-inflicted lesions over her skin.

Her academic performance worsened and she needed to repeat the academic year. She was also adversely affected by an increasingly sour relationship with her mother. She often quarrelled with her mother, accusing her for favouring her younger brother. Apart from the infestation, she did not report any other abnormal experiences or suicidal ideas. The initial diagnosis was depression and she was given a prescription of fluoxetine 20 mg daily.

After 3 months of treatment, the patient claimed to have less discomfort as the number of ‘bugs’ had decreased. However, she suddenly presented with irrelevant speech with loosening of associations, auditory hallucinations, persecutory ideas, thought insertion, insomnia, and fleeting suicidal ideas necessitating psychiatric hospital admission. Preliminary blood tests, computed tomography (CT) scan of the brain, and electroencephalogram were all normal, although she wanted to look for the ‘bugs’ on the CT film. At that point, she was diagnosed as having a psychotic depression superimposed on the prolonged moderate depressive episode; brief psychotic disorder and schizophreniform psychosis were entertained as differential diagnoses.

In view of the acute psychotic features, fluoxetine was tailed off with simultaneous commencement of trifluoperazine 5 mg daily that was later titrated up to 8 mg. Her mental state rapidly improved and the delusion of infestation together with the other psychotic and depressive symptoms gradually subsided and eventually ceased by the end of the second week following the introduction of trifluoperazine. She regained full insight into her psychiatric illness and accepted that the experience of infestation was a delusion.

Discussion

Most psychiatrists, dermatologists, and public health officers agree that DI is not a rare psychiatric syndrome.^{2,4,12,13} The best approximation of its frequency was provided by Trabert, who conducted a survey among one-third of all psychiatric, neurological, dermatological, geriatric, and public health facilities in western Germany in 1988.³ He estimated that there were 6 new cases of DI per 1,000,000 population/year.

As patients with DI predominantly contact dermatologists, general practitioners, ENT specialists, or public health doctors, recognition of the syndrome in the wider medical community is essential as the mean duration of DI before identification as a psychiatric illness is 3.13 years (range, 2.00 weeks to 35.00 years).⁴ Early recognition and treatment of DI is all the more important as it causes considerable suffering to patients and their relatives, while effective psychiatric treatment in the form of antipsychotic medication is available.^{4,7,10-13}

This patient demonstrated 2 unusual features that deserve attention. Firstly, she comes from an age group where DI is rarely reported. In fact, to the best of our knowledge, she is the youngest patient with a full-blown presentation of DI, as the youngest patient reported to date was a 16-year-old mentally retarded girl.⁸ In a comprehensive survey conducted in Germany, the frequency of DI for the 20 to 29 years age group was 0.29 patients per 1,000,000 population/year, while the corresponding figure for the 80 to 89 years age group was 8.40.³

Secondly, in this patient, DI appeared within the context of a prolonged, moderate depressive episode culminating in an acute psychosis. DI and depressed mood preceded the emergence of frank psychosis by 1 year. With the resolution of acute psychosis, both the DI and the pre-existing depressive features disappeared.

There may be contributing factors for the development of delusional infestation in this patient. In addition to a biological predisposition, the premorbid social isolation might have been a predisposing factor.^{2,4,6,7} Her delusion of infestation may have been suggested by the experience of having lived in a wooden hut in a rural area with frequent mosquito bites. Dermatologic illness (e.g., scabies) prior to the commencement of DI is occasionally reported.^{1,14} Sensitive personality traits may also come into play, together with prolonged social isolation and an absent mother.

DI was first described by Thirbierge in 1894,¹⁵ although a similar condition in elderly people may have been referred to earlier in an eighteenth century English textbook written by Willan: “... an invasion of very small animals, which move quickly. They are hard to catch and difficult to examine in a microscope”.²

The uncertainty about the phenomenology and nosological position of DI is reflected by the terminological confusion.^{12,16} In an exhaustive review of the literature, Skott collected 8 terms in English, 13 terms in German, and 10 terms in French for DI.² The consensus opinion nowadays

holds that DI is most frequently a syndrome that may occur in the context of several psychiatric disorders such as affective psychoses, schizophrenia, alcohol and drug abuse, and mental retardation.^{2-4,10,11-13,16,17} Examples of neuropsychiatric ('organic') conditions underlying DI include syphilis,^{1,2} leprosy,¹³ brain tumour,¹⁸ cerebrovascular disease,¹⁹ multiple system atrophy,²⁰ diabetes mellitus,^{2,13} hypertension,²¹ dementia,²² pellagra, and vitamin B₁₂ deficiency.^{8,9,10,11} Some of these somatic conditions (e.g., diabetes, peripheral arteriosclerosis) do present with paraesthesias or pruritus that may serve as a predisposing factor for DI.²

When DI presents without symptoms of other psychiatric or organic conditions, the diagnosis according to the *Diagnostic and Statistical Manual of Mental Disorders-IV* is delusional disorder, somatic type.^{2,4,11-13,16} Delusional disorder is the primary diagnosis for 40% to 50% of all patients with DI.^{4,12,13} Within this diagnostic category, approximately 5% to 15% of patients are induced by another patient, usually a close relative.^{23,24}

Despite the fact that most of the 1223 patients reported up to 1995 were Caucasian,⁴ it is clear that DI is by no means a culture-specific syndrome. The inequality of ethnic distribution of published cases is merely the function of the relative lack of attention paid to DI outside Caucasian psychiatry. Being infested is a universally recognised phenomenon symbolising a combination of death, decay, isolation, shame, and ostracism from society. Therefore, it is expected that such a delusional content would be ubiquitous. While the sociocultural underpinnings of DI may be shared by different cultures, there is some preliminary evidence that the disorder might have specific characteristics in Asian patients. In a series of 102 patients in the Japanese literature,¹² the course of DI was found to be mainly phasic as opposed to the mostly insidious onset seen in Caucasian⁴ or Indian patients from New Delhi.¹³ The role of regional sociocultural factors is evidenced by the fact that Indian patients from the Madras region were younger (a mean age of 36.4 years for women), had a shorter duration of illness (mean, 10.4 and 17.9 months for men and women, respectively) and presented with a disproportionately high amount of ear involvement in the delusional content (9 of 19 patients)¹⁰ compared with the New Delhi cohort.¹³ Comparative studies targeting the sociocultural background of DI appear to be a potentially fruitful area for further research.

We are not aware of any publication of a series of Chinese patients with DI, although single case reports have appeared.¹¹ Informal inquiry among Hong Kong dermatologists suggests that DI is quite prevalent in this locality but patients are reluctant to seek psychiatric help. Only the systematic analysis of a large series of Chinese patients

would answer the question of what, if any, special features are present in Chinese patients with DI.

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