

Delusional Infestation: Folie à Famille: A Rare Case

Fatma YAPRAK¹, Muhammed Kaan TEMIRKAYNAK², İrem Ekmekçi ERTEK¹, Peter LEPPING³ and Behcet COŞAR¹

¹Department of Psychiatry, and ²Department of Dermatology, Faculty of Medicine, Gazi University, Ankara, Turkey, and ³Department of Psychiatry, School of Health Sciences, Bangor University, Mysore Medical College and Research Institute, Wrexham, Wales, U. E-mails: fatma.yaprak@gmail.com; muhkatem@gmail.com

Submitted Oct 7, 2024. Accepted after revision Dec 2, 2024

Published Jan 21, 2025. DOI: 10.2340/actadv.v105.42186. Acta Derm Venereol 2025; 105: adv42186.

Delusional parasitosis (DI), first described in 1799, is a psychiatric disorder classified under delusional disorders in the DSM-5 and ICD-11. It is characterized by persistent delusions of infestation by parasites or insects despite the absence of any medical evidence to support these beliefs (1, 2). Although DI can occur at any age, it is more commonly observed in women over the age of 50 (3). When treated with antipsychotics, complete remission has been achieved in 50% of patients (2, 4).

DI can be primary, occurring without any organic or psychiatric cause, or secondary, associated with psychiatric disorders such as schizophrenia, dementia, or depression, as well as metabolic or central nervous system damage (2).

To investigate potential secondary causes of the condition, a detailed history, physical examination, laboratory tests, and advanced diagnostic evaluations targeting suspected diseases are recommended (5).

Patients may inflict physical or chemical harm on their skin in attempts to remove perceived parasites, leading to secondary dermatological lesions (2). The collection of non-living materials such as fragments of clothing, breadcrumbs, insect remains, skin debris, or threads in a container, presented by some patients as evidence, is referred to as the “specimen sign” (6).

Shared DI (folie à deux) is a psychiatric condition characterized by the presence of similar psychotic symptoms,

usually in the form of delusions, in 2 or more people with the same family or emotional bond, usually with 1 person being the inducer (7). A study conducted in Japan reported that family cases were mostly between mother and child and married couples. In other studies, a relationship of 37% between sisters, 24% between married couples, and 22% between mother and child was found (8).

Here, we present a case referred by dermatology with a preliminary diagnosis of DI, later diagnosed as shared DI after discussions with the patient’s family revealed similar beliefs. The patient’s sister and mother were living together in a different house in a rural area. This is a rare case report of a family showing shared psychotic disorder both between a married couple and between siblings living in different houses.

CASE REPORTS

Case 1: Patient. A 56-year-old male patient who worked as a shoe repairman was referred to psychiatry by a dermatologist with a working diagnosis of “delusional infestation”. The patient presented to dermatology with complaints of having insect-like creatures under his skin, which he could not name, causing a sensation similar to itching, and seeing the dead bodies of these insect-like creatures on his body after using various medications. He believed that the insects were active and alive under his skin but died after leaving the body. According to the patient, the adults were black, the larvae were yellow, and the eggs were white. He stated that some of the lotions he had applied to his skin killed

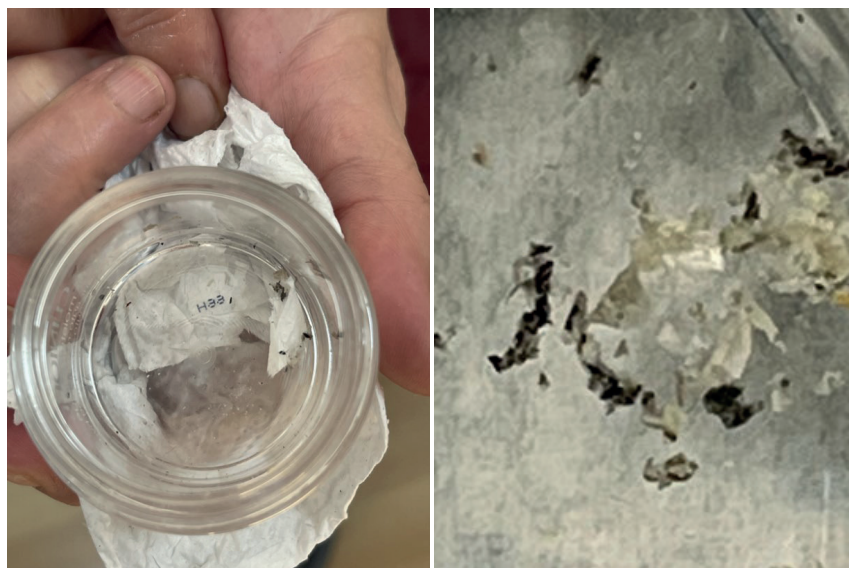


Fig. 1. Box in which the patient collected the insect-like black, yellow, and white particles and the particles shown as evidence.

Table I. Clinical characteristics of the patients

Patient	Insect-like creatures under the skin	Specimensign	Believing in others' symptoms (shared delusions)	Identifying the creatures	Itching	Avoiding contact with others
Inducer	+	+	+	+	+	+
Wife	+	-	+	-	+	+
Sister	+	-	+	-	+	+
Mother	-	-	+	-	+	+

the bugs, while others brought them to the surface. The patient had collected the insect-like black, yellow, and white particles in a box and showed these as evidence during the interview (**Fig. 1**). He had a history of using mixtures prepared by various herbalists, scabies treatment medicines, and cleaning materials to kill the creatures. He stated that he did not use the common areas of the house in order not to infect his son, with whom he lived. To avoid contamination, he used slippers in the house, did not hug his son, and did not accept guests into their house.

When a detailed history was taken from the patient, it became clear that similar beliefs were also present in his mother and sister, who lived in different houses from him, and in his wife of 25 years, who was living with him. Therefore, a detailed history, physical examination, dermatological examination by a dermatologist, cranial MRI, and blood tests were performed on all family members. Full investigations were performed by the infectious diseases clinic due to the suspicion of possible parasites. After approximately 4 months of investigations, the patients were re-evaluated by psychiatrists and dermatologists working together in our psychodermatology clinic.

No pathology was detected in the examinations of the patient. MMPI and Rorschach tests revealed paranoid features. The patient's complaints were compatible with and diagnosed as delusional infestation.

Case 2: Wife The patient's 49-year-old wife began to think that similar creatures might be present in her body some time after her husband's complaints. Her complaints were similar to those of her husband, and she practised the same cleansing rituals. No pathology was detected in the examinations. MMPI result was reported as somatization tendency, and anger problems. The Rorschach test showed that affective features could be observed. Dermatological examination revealed widespread xerosis on the body due to recurrent scabies treatment.

Case 3: Sister The patient's sister, a 48-year-old woman, stated that her mother started to complain of itching after she was diagnosed with scabies, but that these complaints disappeared with scabies treatment. Later, when she learnt about the complaints of her brother, who lived in a different house, she said that she experienced similar sensations and saw black insect-like parts on her body. According to her brother, these were not scabies bugs, but belonged to a rare insect outbreak. During the interviews it became clear that she had similar beliefs to her brother and experienced similar sensations in the same parts of her body. In the MMPI test results, affective features were prominent. The Rorschach test showed paranoid features.

Case 4: Mother The mother of the patient, a 76-year-old woman, was diagnosed with scabies 1 year ago and recovered after treatment. During the interviews, she stated that she did not have these insects and that she wanted her children to be treated. Psychiatric tests could not be performed because the patient was illiterate. Cranial MRI revealed no pathology except gliotic changes. Other investigations were normal.

DISCUSSION

In shared DI, the duration of exposure affects the prognosis poorly (9). Separation of the affected individuals

and use of second-generation antipsychotics are recommended for treatment (2).

According to a study with 14 cases, remission was achieved with pimozide, olanzapine, and risperidone (10). In another study conducted in our clinic, complete remission was achieved with aripiprazole treatment at doses of 10 or 15 mg/day in 8 patients after 6-month follow-up (11).

In 2014, complete recovery was achieved with paliperidone in 2 cases of delusional infestation after treatment with pimozide had failed to achieve remission (12). In accordance with our clinical experience, paliperidone treatment was preferred because of its low metabolic side effect profile. The patient agreed to use psychiatric medication after a long psychoeducation session, but did not attend follow-up appointments. The patient's wife and sister did not accept the disease or medication and neither of them attended control visits.

In this case, the same belief (delusion) is seen both in a married couple and between siblings living in different houses. One of the siblings lived in the city centre and the other in a rural area. DI was not found in the patient's mother who lived in the countryside with her sister. This is another interesting aspect of this case and leads us to think that shared delusional infestation may occur due to both hereditary and environmental factors. As our patients were lost to follow-up, whether it was hereditary or not, could not be analysed.

As a conclusion, we present a very rare case report of shared delusional infestation and, to our knowledge, the first presentation of this disease seen in family members living in different houses.

The authors have no conflicts of interest to declare.

REFERENCES

1. Squire SB, Taegtmeyer M, Javed Q, O'Dempsey T, Kullu C, Lepping P. A combined tropical medicine and psychiatry approach to patients with possible delusional infestation. *Trans R Soc Trop Med Hyg* 2024; Sep 3: trae054 [Online ahead of print]. <https://doi.org/10.1093/trstmh/trae054>
2. Freudenmann RW, Lepping P. Delusional infestation. *Clin Microbiol Rev* 2009; 22: 690–732. <https://doi.org/10.1128/CMR.00018-09>
3. Trabert W. 100 years of delusional infestation: meta-analysis of 1,223 case reports. *Psychopathology* 1995; 28: 238–246. <https://doi.org/10.1159/000284934>
4. Tang PK, Lepping P, Lepping SG, Noorthoorn EO, Squire SB, Mohandas P, et al. Efficacy of antipsychotics in delusional infestation. *J Eur Acad Dermatol Venereol* 2024; May 10 [Online ahead of print]. <https://doi.org/10.1111/jdv.20081>
5. Ahmed A, Affleck AG, Angus J, Assalman I, Baron SE, Bewley A, et al. British Association of Dermatologists guidelines for

the management of adults with delusional infestation 2022. *Br J Dermatol* 2022; 187: 472–480. <https://doi.org/10.1111/bjd.21668>

6. Freudenmann RW, Kölle M, Schönfeldt-Lecuona C, Dieckmann S, Harth W, Lepping P. Delusional parasitosis and the matchbox sign revisited: the international perspective. *Acta Derm Venereol* 2010; 90: 517–519. <https://doi.org/10.2340/00015555-0909>
7. Wehmeier P, Barth N, Remschmidt H. Induced delusional disorder: a review of the concept and an unusual case of folie à famille. *Psychopathology* 2003; 36: 37–45. <https://doi.org/10.1159/000069657>
8. Kashiwase H, Kato M. Folie à deux in Japan – analysis of 97 cases in the Japanese literature. *Acta Psychiatr Scand* 1997; 96: 231–234. <https://doi.org/10.1111/j.1600-0447.1997.tb10156.x>
9. Gralnick, A. Folie à deux – the psychosis of association. *Psych Quar* 1942; 16: 491–520. <https://doi.org/10.1007/BF01573913>
10. Cosar B, Taskinoglu K, Lepping P, Burhanoglu S, Eser HY, Taner ME, et al. Treatment options of delusional parasitosis: case series of 14 patients. *Anadolu Psikiyatri Dergisi* 2012; 13: 239ff.
11. Çınar M, Kutlutürk P, Ertek İE, Coşar B. Aripiprazole as a treatment option for delusional infestation: case series of 8 patients. *Psychiatry Clin Psychopharmacol* 2019; 29: 794–797. [Published online Aug 31 2019]. <https://doi.org/10.1080/24750573.2019.1653134>
12. Altınöz AE, Tosun Altınöz Ş, Küçükkarapınar M, Coşar B. Paliperidone: another treatment option for delusional infestation. *Australas Psychiatry* 2014; 22: 576–578. <https://doi.org/10.1177/1039856214546390>