

Case Report

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Infestation Delusion



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Abstract

In this article we present the case of Mrs. P (55 year old), a general practitioner who has consulted a number of departments in the Pitié-Salpêtrière Hospital because she is convinced that she is infected with *Aspergillus* and that the infestation took place 10 years ago. No consultation has changed her mind. This observation raises the question of the differential diagnosis between Somatic delusional disorder - a somatic type of delusional disorder-Ekbom Syndrome, and a somatic symptom disorder, which is a condition newly defined in DSM 5.

This diagnosis must be based on the definition of delusional disorder and on DSM 5. Following a review of the literature, we will discuss risk factors that may be involved in the disease. We are also describing the management of somatic delusional disorder, including the choice of psychotropic treatment (neuroleptic, antidepressants, then electroconvulsive therapy) and how is the difficulty of engaging in treatment and establishing a therapeutic alliance. Finally, we will briefly discuss the benefits and risks of hospitalization without consent.

Keywords: Infestation delusion; Somatic delusional disorder; Ekbom syndrome

Introduction

Delusional Parasitosis is rare about 2 to 17 cases per million inhabitants and presents a double challenge, diagnosis and therapeutic. Indeed, the clinical symptoms fall into a grey zone, and it is not clear whether or not it is a somatic delusional disorder or a somatic symptom disorder. Treatment for the condition is still poorly codified, with a number of studies recommending antipsychotics and others advocating the use of antidepressants or electroconvulsive therapy. We describe the case of a patient who consulted doctors on several occasions at the Pitié-Salpêtrière Hospital. This patient's case will provide an opportunity to discuss the diagnosis and therapeutic management of the condition as well as the follow-up.

Case Report

Mrs. P is a 55-year-old woman who was referred to the psychiatric department by the infectious disease department where she was hospitalized for a suspected infection with *Aspergillus*. She believed she suffered from a disease that had been inadequately managed since 2008. She comes from Romania and lives in Paris. Her Husband is an engineer, and they have two daughters who live in London and in Romania. In the past, she has worked as a general practitioner. She has not worked since at least 2008.

She does not declare any personal or family psychiatric history. Her regular medications include only one psychotropic: a hypnotic at bedtime. Her somatic history includes pulmonary tuberculosis of the right upper lobe, high blood pressure treated with Sartran and well-balanced hypothyroidism under Levothyrox.

Her regular medications also include Prednisone (15mg per day), Doliprane, oregano oil, grapefruit extract, acerola, turmeric, and omega 3. All are treatments she prescribes herself. The history of the disease begins around 2008, following a professional activity in a Parisian dispensary. The premises were infested with the fungus *Aspergillus fumigatus*, and Mrs. P acquired the conviction that she had been infected by it. During The ten years that followed, Mrs. P consulted with doctors and was hospitalized on several occasions in various hospitals in the Paris region and abroad (in England, Spain, Germany, Italy, and the USA).

The reports of the infectious disease departments of the Pitié-Salpêtrière and another respected hospital in Paris excluded an infectious pathology was excluded and determined that there was a discrepancy between the absence of positive results and the patient's statements. Mrs. P was next referred to the adult psychiatry department in case of an underlying psychiatric disorder. This referral was accepted by the patient, who wished to

demonstrate an absence of psychiatric pathology. Mrs. P was seen for the first time in psychiatric consultation with her husband.

She complained of headache, left basithoracic pain, diffuse sensory disturbances, and blurred vision. The patient explained her symptoms by the fact that she had been infected with *Aspergillus* in 2008. There was no evidence of *Aspergillus* or history of antifungal treatment in her file. Ms. P wanted to be treated with intravenous gamma-globulin. Logorrhea, tachyphemia, and sthenicity were observed in the patient. There was no fear of contracting the disease; instead, there was an unwavering conviction that it had already been contracted. The patient did not report sadness of mood, sleep disturbances, or acoustico-verbal or visual hallucinations. She did not have listening attitudes, elements of weirdness, or engine slowdown. Nor did she have suicidal thoughts. The interview was marked mainly by Ms. P's claims about the lack of recognition of her disease and the lack of adequate treatment. Her husband totally supported his wife's claims. At the end of the interview, the patient was offered a follow-up consultation, which she accepted. She was not prescribed psychotropic treatment. The patient was subsequently seen in liaison. She regularly attended the hospital requesting additional examinations (particularly repeated eye backgrounds and electroretinograms) to prove the presence of a fungal infection. Three consultations excluded an ophthalmological pathology. The patient was said to have been aggressive in response to the refusal of ophthalmologists to re-test, and they suspected a manic phase. The manic symptomatology was excluded by the liaison psychiatrist.

An emergency psychiatric advisory was also requested by the cardiology department in relation to the patient's belief that she had chronic myocarditis. This diagnosis was overturned by the normality of further examinations, resulting in insults and threats of prosecution levied by Ms. P. against the cardiologist. She also threw bottles of hydro-alcoholic solution at staff. Ms. P was seen by a psychiatrist four times in total within the institution. She did not wish to have a further psychiatric follow-up.

The patient showed herself to be sthenic; she did not wish to meet the psychiatrist and left the hospital before being interviewed. We contacted her recently to offer a new appointment in the psychiatry department or the emergency room. She declined our offer, arguing that she had a somatic pathology and not a psychiatric condition and, that therefore we could not help her. She added that she did not feel depressed or suicidal, that her pain was real, and that she preferred to send us an email detailing the evolution of her symptoms, which seemed to have increased.

Diagnosis

This diagnosis in this case is not easy. Indeed, the case underscores the fact that we do not have a way to distinguish between the DSM V diagnosis of somatic delusional disorder and somatic symptom disorder. We could make a first hypothesis that

the patient suffers from somatic type delusional disorder, in which a person's belief cannot be changed by persuasive arguments or evidence regarding the normality of the exams. The main difficulty with this clinical description is in considering the patient's belief in being ill as delusional. However, if we refer to Jaspers' definition, then it appears that this patient is indeed convinced that she has a serious illness, despite the numerous medical opinions to the contrary. This hypothesis is reinforced by time and by the patient's numerous requests for further examinations. Besides, in the case of disseminated aspergillosis, there is no diagnostic test confirming or disconfirming the diagnosis. The criteria for somatic delirium are presented in Appendix 1. If the notion of delusional disorder is under discussion, the other criteria are all met. The diagnosis of aspergillosis is based on a constellation of arguments, which prompts Mrs. P to multiply her requests for additional examinations.

We also need to discuss a new diagnosis: somatic symptomatology disorder (SSD), which is a new entity in DSM V. The criteria listed in DSM V are given in Appendix 2. Mrs. P's multiple pains also meet all these criteria: she presents symptoms (particularly multiple pains) which she complains about in consultation with doctors and which impair her quality of life. Ms. P's thoughts, emotions, and behaviors are excessive. She exhibits psychomotor agitation and throws objects in doctors' offices. Some doctors in general departments suspected she was having a manic episode.

These symptoms have been present for more than 6 months. However, the intensity of the beliefs responsible for these behavioral disorders makes us prefer the diagnosis of delusional pathology. Indeed, to make a diagnosis of SSD, it is necessary to eliminate the possibility of delusional disorder. We therefore retain the diagnosis of somatic type delusional disorder, in this case an infestation delirium. This is not a case of Ekbom syndrome, although the diagnosis is close. Ekbom or dermatozoic delusional disorder is also an infestation delusion, but one in which the patient has a conviction of being infested with skin parasites. The patient has the sensation of movement under the skin and subjective certainty that the symptoms are caused by the presence of worms, insects, or other parasites in the skin. We could consider these symptoms as tactile hallucinations or paresthesia. Skin lesions can be caused by the patient attempting to remove the parasites or by the application of disinfectants and pesticides. The patient may also bring skin samples to the consultation in order to prove the infestation [1]. Mrs. P does not exhibit this behavior all the time.

Risk factors contributing to the pathology in the case of this patient.

The epidemiology of persistent delusional disorder is not specific enough. The clinic is very varied. It is more relevant to look at the clinical profile of patients with infestation delirium.

This profile has been studied by Bhatia [2]. The study reports 50 cases of delusional infestation followed in a hospital for a period of 8 years. In this sample, 66% of the patients were women, and 88% of the subjects were over 45 years of age, like Mrs. P. The onset of the disorders was insidious at 94%, as was also the case for Mrs. P. However, Mrs. P's delirium was not about insects, unlike 56% of the study population. The most common medical comorbidities in the study population were diabetes, leprosy, and depression, but at low rates (4.6 and 10%). Mrs. P. did not have these pathologies.

Another study [3] concludes that 74% of patients affected by delusional parasitosis have a personal history of depression. Our patient's history does not allude to this, and the symptoms reported during consultations or hospitalizations do not support such a diagnosis. Moreover, in 1 to 15% of cases the infestation delusional is shared with another person, often the spouse, as is the case for Mrs. P [4]. There is no data on working in the health field. Mrs. P herself is a general practitioner, and one wonders what the influence of her profession might have been on the development of her pathology. One might also wonder about the personality traits that would promote the emergence of such a delirium. Obsessive traits, on the one hand, and paranoid traits on the other, are two types of traits that would favor what was formerly called hypochondria with the dimension of claim and ethnicity. In the literature there is no mention of these personality traits. Mrs. P has a frank paranoid note. Paranoid traits have been reported in the literature regarding Ekblom syndrome but not regarding somatic-type delusional disorder [5].

We turn in this last part to the problems of managing infestation delirium, referring to past research. We address the problem of the treatment of this pathology, the therapeutic choice and then the therapeutic alliance. References to the treatment of somatic delusions, and sometimes, more specifically, delusional infestation, are extremely varied. The main difficulty in evaluating the treatment of these delusions lies in the small patient samples that can be constituted. In most cases, these patients do not desire psychiatric care because they are convinced that they have a somatic pathology. On the other hand, the doctors who receive them do not always refer them to a psychiatrist or even detect that they suffer from a psychiatric disorder.

Treatment Options

Neuroleptics treatment

In studies, the historical treatment for somatic delusional disorder is the first-generation antipsychotic Pimozide (Orap) [6]. This neuroleptic achieves a rate of remission in 50 % of patients versus 30% spontaneously (meta-analysis of 1223 case reports). Use of this drug is not recommended, given its side effects: extrapyramidal syndrome and lengthening of QT in particular [7]. Another study [8], although conducted on small samples, shows partial or total remission in 69 to 72% of cases with risperidone and olanzapine, respectively. It recommends using low doses

(1 to 2mg of risperidone and 2 to 5mg of olanzapine); It also recommends the prescription of amisulpride (200 to 400mg per day) and haloperidol (2 to 5mg per day). Furthermore, this publication suggests that antihistaminergic antipsychotics such as quetiapine are deceptive in the treatment of somatic delusions. First-generation antipsychotics are thought to cause more total remission than second-generation antipsychotics.

A detailed, systematic review of the literature returned a number of papers but only a few with the highest level of evidence [9]. The only systematic review found is that by Lepping (2007). Campbell [10] more recently suggests prescribing first risperdal (0,5 to 4mg), then olanzapine (5 to 1mg), then aripiprazole (2 to 10mg).

Antidepressant treatment

The value of serotonin reuptake inhibitor antidepressants in somatic delusions has been evaluated. In the case of a 77-year-old patient, the diagnosis of depressive syndrome was excluded. There was remission under a dose of 20 mg of paroxetine monotherapy. The author also reports the results of several studies, conducted in the 1980s and 1990s, that demonstrate the effectiveness of tricyclic antidepressants, clomipramine in particular. In addition, he supports his carry-over case with the use of single-photon emission tomography. At the beginning of the study, the patient had a reduced cerebral flow in the left parietal and temporal regions. This brain flow normalized by the 60th day under paroxetine. The researcher therefore offers the hypothesis of serotonin dysfunction in somatic delusions [11]. In another case, a 32-year-old woman who had been somatically delirious for 8 years, was treated with 25 and 37.5 mg of paroxetine. The patient remained in remission for 1 year. However, it is noted that this patient had previously been treated with olanzapine for 4 weeks. The author does not rule out the diagnosis of delusional melancholy, which would explain the effectiveness of antidepressants [12]. We also found a case report of a patient successfully treated with 2mg of risperidone and 200 mg of sertraline [13].

Electroconvulsive therapy treatment

The use of electroconvulsive therapy has been evaluated by Miho Ota [14]; This is a carry-over box with a single-photon tomography assessment before and after treatment. This is a 72-year-old man admitted for a 6-month-long somatic delirium. This man can say, "My jaw is falling" " the food disappears from my esophagus". After six sessions of seismotherapy, the patient no longer had any somatic delusions. However, it is noted that this patient had already experienced a similar episode that had been successfully treated with antidepressants. Seismotherapy is the reference treatment for characterized depressive episodes. It can be hypothesized that seismotherapy treated a Cotard syndrome. The article also notes that the patient's Beck score also improved. This article is of interest in the context of the effort to better understand somatic delusion. The seismotherapy protocol was

coupled with a PET-scan. The imaging showed a reduction in flow in the left parietal lobe and in the left temporal lobe only when the patient presented delusional ideas. This reduction was no longer visible when the patient no longer had delusions. Furthermore, there are also functional brain changes specific to depression, but in other regions, like the frontal lobe or frontotemporal region; consequently, these brain changes would be specific to somatic delusions [15].

Reich [16] has recently summarized current therapeutic options for patients with delusional infestation based on detailed searches of the PubMed and Clinical Trials.gov databases. He confirms the use of selective serotonin reuptake inhibitors as a first-line drug and suggests that escitalopram or sertraline might be good alternatives. Combining them with antipsychotics leads to the fewest side effects. When pharmacological treatment fails, electroconvulsive therapy might be proposed.

Hospitalization without consent

In the literature, there is no data regarding hospitalization without consent in cases of this type of delusion. The patient is very sthenic and sometimes aggressive with others (insults doctors, throws objects during consultations). However, there is no threat or suicidal risk. Moreover, the decision to hospitalize without consent for example, at the request of a third party could prevent the establishment of a therapeutic alliance; This measure should therefore be reserved for the most extreme cases.

Therapeutic alliance

Patients with somatic delusional disorder are difficult to engage in a therapeutic alliance; their delusional beliefs of having a somatic disease prevent them from adhering to care. Some authors have published recommendations for the management of these patients. They suggest combining dermatology and psychiatry in an outpatient clinical setting [17].

Conclusion

Mrs. P presents a somatic delusional disorder rather than a disorder with somatic symptomatology. It is not also a case of Ekbom syndrome. What is more, this patient has pathological personality traits. Close multidisciplinary cooperation between clinicians is necessary to improve adherence to care. Antipsychotic medication is the first-choice treatment for this disorder but antidepressants such as IRSS may for some doctors present an interesting alternative that has fewer adverse effects. It would also make it easier for these patients to be accepted than antipsychotic treatment. However, studies on larger cohorts are needed to assess the benefit of antidepressant treatment.

Diagnostical and Statically Manual of mental disorder Fifth edition code 297.1 F 22 (Appendix 1 & 2).

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