Delusion of Parasitosis: A Descriptive Analysis of 88 Patients at a Tertiary Skin Centre

Dear Editor,

Delusions of parasitosis (DoP) is a form of mono-symptomatic hypochondriacal delusional disorder of bodily infestation. Patients present to the dermatologist with a fixed false belief of infestations of the body. They may share similar characteristics such as ritualistic behaviour to rid themselves of their infestations. Although the pathophysiology is unclear, it is likely to be multifactorial including genetics, organic factors, premorbid traits, acute triggers, and social vulnerability.[1] The main challenge is starting these patients on appropriate treatment as they do not have insight to their problem and are often otherwise normal. The mainstay of treatment are antipsychotics, though the addition of antidepressants might be useful. In the present study, we describe the novel combination of risperidone and fluoxetine in the management of such patients.

Materials and Methods

We conducted a retrospective review to study the demographic characteristics, symptomatology, comorbidities, associated psychiatric disorders and treatment outcome of patients seen in a tertiary dermatology institute. Patients with a diagnosis of DoP seen at the National Skin Centre, Singapore, over a 9-year period between January 2004 and December 2012 were included. They were identified through: the electronic medical records, with diagnoses containing 'delusion' or 'parasitosis'; and from electronic pharmacy prescriptions of risperidone; and from the Psychodermatology Clinic patient database. All patients were managed in the joint Psychodermatology Clinic and concurrently by a psychiatrist and a dermatologist.

Results

Patient Demographics and Symptoms

Eighty-eight patients with DoP were identified. There were 52 (59%) females and 36 (41%) males. The ethnic composition was 87% Chinese, 5% Malay, 5% Indian and 3% others—there were more Chinese patients seen compared to the general population of Singapore (74%). The mean age was 61.4 ± 13.0 years.

The delusions were of infestation (86/88, 98%) and fibres (2/88, 2%). They experienced symptoms in/under the skin (80/88, 91%), inside body orifices (4/88, 5%), in the body (3/88, 3%) and in the hair/scalp (1/88, 1%). Thirty-seven patients (42%) reported an event triggering the onset of symptoms, including exposure to new home/office environments (14%) and animals (9%), and travelling (9%).

Thirty-eight (43%) presented with the classical "matchbox"sign, with specimens in containers. 'Folie a deux' involving a family member was present in 7 (8%) patients. Sixty (68%) and 32 (36%) patients displayed excessive cleaning of oneself and their environment, respectively. In the Asian context, these patients rid themselves of the parasites by: kerosene and oil to the scalp/hair (3/88), joss sticks (1/88), smoking parasites with charcoal (1/88), and Chinese herbs and vinegar (1/88). Twenty (23%) patients engaged in self-mutilation using instruments (12/88), caustic agents (5/88) and heat (3/88) (Fig. 1).

Clinical Presentation and Investigations

The main skin signs manifested were: excoriations in 37 patients (42%) and irritant contact dermatitis in 29 (33%). Nineteen (22%) patients had no skin signs. In patients with excoriations, most of these occurred in a generalised distribution (41%), followed by limbs (15%), face (10%), scalp (6%), and trunks (1%). Half had

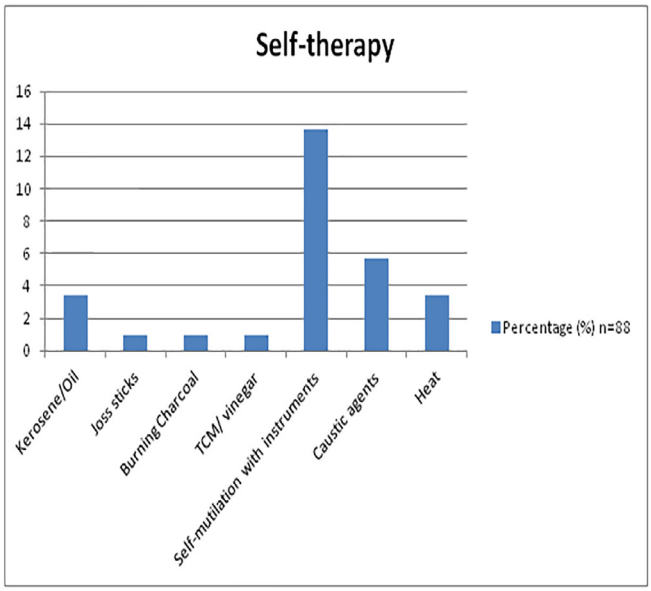

Fig. 1. Chart showing the various methods used by patients to rid themselves of their perceived infestation.

accompanying medical comorbidities (Fig. 2), including diabetes (15/88), hyperlipidaemia (16/88), hypertension (21), renal impairment (5/88), non-diabetes endocrine disorders (3/88), and haematological disease (3/88). Ten (11%) patients had pre-existing skin diseases, of whom 8 (9%) had endogenous eczema or psoriasis. Fourteen patients (16%) had psychiatric comorbidities, including 8 with schizophrenia, 6 with depression, and 3 with bipolar disorders. Three (3%) patients were found to have suicidal tendencies. Ten (11%) patients had associated psychodermatoses, including 3 who had trichotillomania, 5 with dermatitis artefacta and 2 with neurotic excoriations. Over half of the patients underwent investigations: blood tests in 47 (54%), scrapings were done to exclude scabies and fungus in 35 (40%), and skin biopsy to differentiate serious disorders, in 10 (12%).

Treatment and Follow-up

The patients were treated with medications for 7.7 months, and followed-up for 21.2 months. Thirty-nine (44%) patients were prescribed a combination of risperidone and fluoxetine, 15 (17%) risperidone, 2 (2%) fluoxetine. These were started on low doses and titrated upwards as most patients were elderly. Thirty-two (36%) patients did not receive medications. Adverse effects such as extrapyramidal side effects and drowsiness were observed in 22 (39%) patients—20 from risperidone and 2 from fluoxetine. There were no major side effects and in 15 patients, the side effects improved after the dose was reduced.

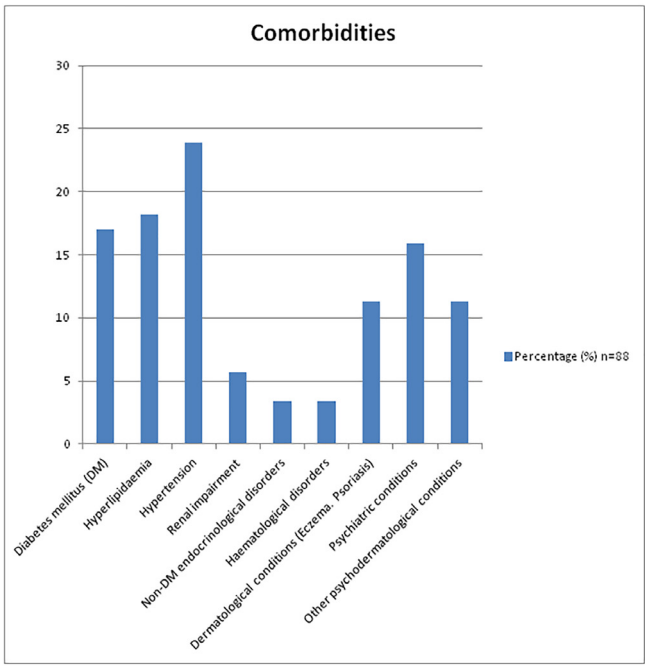

Fig. 2. Chart showing the underlying comorbidities.

Twenty-nine (33%) patients defaulted follow-up without starting treatment. In the 59 (67%) patients who started treatment, 43 (73%) had improved clinically. Sixteen (27%) had no improvement. Of those who responded, clinical improvement was observed by 3.7 ± 7.5 months. When treatment was discontinued or tapered, 10 (23%) of these patients relapsed within 2 years. It is known that patients do relapse on stopping medication.

Discussion

The majority of our patients were Chinese females who presented with characteristic symptoms and features seen in patients with DoP. Perhaps unique to our local context was the use of abrasive agents such as kerosene for self-therapy.

A fairly high percentage (33%) of our patients defaulted follow-up even though drugs were not prescribed. Indeed, treatment of DoP is challenging and much of this difficulty lies in having a trusting relationship with the patient. Physicians need to learn how to cope with psychiatric patients by displaying active listening skills and showing interest in their concerns. However, in the case of DoP, it is important not to collude with the patient and offer them hope in dealing with their problem. Due to the nature of the condition and ethical considerations, randomised controlled trials are lacking regarding the management of DoP. A systematic review indicates that antipsychotic agents remain the treatment of choice.[2] Atypical or second-generation antipsychotic agents such as risperidone, olanzapine or amisulpride in age-appropriate doses are commonly used to treat DoP.[3]

Pimozide—which is effective in up to 80%—has limited availability. This is related to its adverse extrapyramidal side effects, including tardive dyskinesia which may be irreversible.[4] It may also prolong the QT interval, which limits its use.

In this study, 39 (44%) of the patients received a combination of risperidone and fluoxetine and 22/39 (56%) of them improved clinically. This is comparable to other reported remission rates of 25%-69% with risperidone.[5,6,7] Previous studies have suggested that combining an atypical antipsychotic drug and a selective serotonin reuptake inhibitor (such as fluoxetine) work synergistically to promote the release of dopamine in prefrontal areas.[8] This has been shown in animal studies as well where the coadministration of risperidone and fluoxetine increased the extracellular level of cortical dopamine, serotonin and noradrenaline.[9] This may potentially reduce the risk of side effects by allowing lower doses of each drug used.

Conclusion

In conclusion, this retrospective study of 88 patients with delusions of parasitosis represents a large number of

patients reported in South East Asia (and maybe worldwide) from a dermatological clinic. The unique combination of risperidone and fluoxetine appears to be efficacious without major adverse events. More studies will be helpful to improve the management of this condition.

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