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Brief Research Report

Delirium of Skin Infestation: Epidemiological and Clinical Profile of 73 Patients

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ABSTRACT

Background
This was a descriptive and prospective study that focused on 73 cases of delirium of skin infestation (DSI) from January 1st to December 31st, 2018, in the dermatology department of the Bamako Dermatology Hospital (HDB).

Aim
The aim of this work was to describe the epidemiological and clinical profile of delusions of infestation (Ekbom syndrome), to deepen our knowledge of the disease in order to improve its overall management.

Methods
We carried out a descriptive cross-sectional study of cases of identity document (ID) seen in dermatological consultation in the HDB dermatology department between January 1st and December 31st, 2018. Now, this department is the largest dermatological reference center in the country. In our study, we have included any patient with delirium of parasitic infestation (defined as an unshakeable conviction that small vermin, insects, lice, maggots, proliferate in the skin and sometimes in the body without biological proof).

Results
Delirium of skin infestation constituted 0.3% of consultations in the service. The average age was 52-years with extremes ranging from 12 to 85-years. They were 45 female (62%) and 28 male (45%). The age group (25-64) was the most represented. Out-of-school patients represented 65% of the sample. Among them, 6 cases (8%) were known in psychiatry. The agents incriminated by the patients were mainly ants, earthworms and cicadas. The specimen sign was found in 89% of cases. Insomnia was the most frequent associated sign, at 75%. The types of lesion complications observed in our patients were mainly lichenification, ulceration and excoriation. Seventy-two percent (72%) of patients have refused referral to the mental health service. The profile of Ekbom syndrome was the one of the adult women, described in the previous work.

Conclusion
Delirium of skin infestation is generally considered as rare disease, increasingly observed during our dermatology consultations. Its frequency is probably underestimated.

Keywords
Consultation; Delirium of skin infestation; Ekbom syndrome; Dermatology; Psychiatry; Bamako; Mali.

INTRODUCTION

Delirium of skin infestation (DSI) is a rare type of delirium; described by the Swedish neurologist Karl Axel Ekbom in 1938, as a monothematic delirium, underpinned by tactile or visual hallucinations, generally accompanied by a lived experience: Significant anxiety.

Currently, it is characterized by the fixed belief of a patient who thinks that his skin or body is infested by small living pathogens (or more rarely inanimate) although no medical evidence has been found.[1] These patients are most often women, with no known psychiatric history. They claim to be infected by parasites

migrating in all directions, borrowing the natural orifices, reaching the internal organs, creating tingling and tingling sensations, causing scratching lesions, or even superinfections. This naturally leads patients to consult a dermatologist.[2]

Some studies have been carried out in Europe by Sckott, a Swedish, who has found an incidence of 0.30%,[3] in Vienna. Michael et al[4] who reports 34 cases and a systematic review carried out in 2007 by Lepping et al[5] on 63 cases. There are few epidemiological data on delirium of parasitic infestation in Africa. In Mali we did not find any study on the subject. A better knowledge of the cases will allow us to improve the care. The purpose of this work was to describe the epidemiological and clinical profile of delusions of infestation (Ekbom syndrome), to deepen our knowledge of the disease in order to improve its overall management and then to allow a favorable evolution in order to avoid the chronicization and isolation of the patient.

MATERIALS AND METHODS

We carried out a descriptive cross-sectional study of cases of DSI seen in dermatological consultation in the HDB dermatology department between January 1st and December 31st, 2018. This department is now the largest dermatological reference center in the country and offers approximately 30,000 consultations per year. The study population consisted of patients seen in dermatological consultation at the Bamako Dermatology Hospital during the study period. Were included in our study, any patient with delirium of parasitic infestation, defined as an unshakeable conviction that small vermin, insects, lice, maggots, proliferate in the skin and sometimes in the body without biological proof. The diagnoses retained were essentially based on the clinical examination. All the cases were examined on the general plan (general state of the patient, the constants, coloration of the integuments, examination of the devices), on the dermatological level (examination of the glabrous skin, appendages and mucous membranes) and on the psychiatric plan (the psychiatric interview, examination of the mental state and the somatic examination). A questionnaire was applied to each case and the variables studied were the following: age, sex, marital status, profession, sign of the specimen, tingling, scratching lesions, ulceration, excoriation, lichenification, pruritus, anxiety, insomnia, and hallucination. Data analysis was performed on the Epi Info™ software.[6] French people with calculation of the probability $p<0.05$. The data was collected in total anonymity with the consent of the participants. No financial compensation was granted for participation in the study.

RESULTS

Out of a total of 24,000 consultations, we recruited 73 cases of DSI including 69 primary and 8 secondary forms, i.e. a hospital rate of 0.3%. Adults represented 69.86% of 73 cases. the average age of cases was 52-years, the extremes of 12 and 85-years. They were 45 female (62%) and 28 male 38%). The age group (25-64) was the most represented age group. Out-of-school patients represented (62%) of the sample, i.e. 45 cases. Among them 6 cases or 8% were known in psychiatry. Patients who lived alone (widowed, divorced, single) represented 26% of the workforce among them 73% are women. The reason for consultation was essentially skin infestation (71.24%). The disease has been evolving for at least 3-months in 94.52% of patients. The related signs were mainly insomnia 55/73 (75.34%), tingling 37/73 (50.08%), pruritus 35/73 (47.95%) and anxiety (47.95%) 35/73 (Figure 1).

According to the patients, the causative agents mentioned were: ants, earthworms, insects, flies, lice and grains of sand. Among these elements in question, 65 patients or 89% brought a specimen, the "*sign of the specimen*" (Figure 2).

The site of the infestation of our patients was essentially the limbs in 19.28%, the neck (17.81%), the back (10.85%) and the face (9%). The lesions observed were lichenification in 22% (16 cases), ulcerations in 18% (17 cases) and excoriations in 4% of cases. Biological examinations were normal in 91.78% of patients, except in 4 patients who presented biological infectious signs due to superinfection of their scratch lesions. The traditional treatment

Figure 1. *Related Signs*

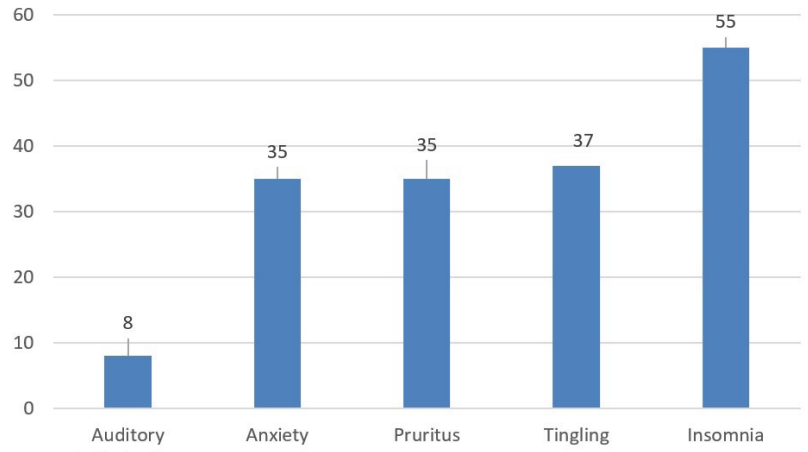

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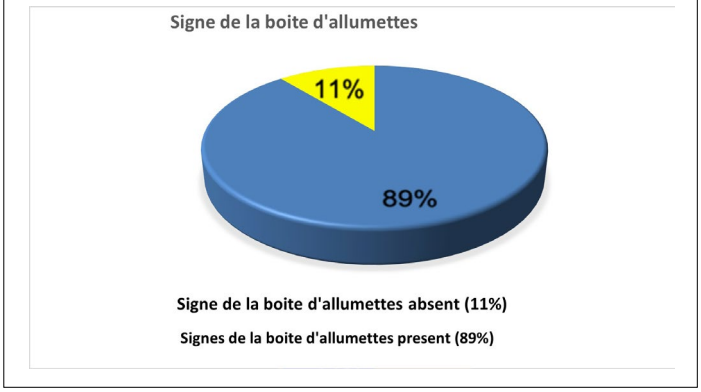
Figure 2. *Distribution According to the Sign of the Specimen*



and mainly the medical treatment based on emollient ointments associated with antiparasitic in 69.86% of our patients was observed in our patients before inclusion. Among them 53/73 (72.60%) refused a referral to a mental health service (Table 1).

Table 1. *Distribution of Patients According to the Response to the Referral Proposal to the Mental Health Service*

Referred to Mental Health Service	Number	Percentage
Accepted agreed	20	27,40%
Refuted	53	72,60%
Total	73	100,00%

DISCUSSION

We carried out a cross-sectional, epidemiological and clinical study on DSI at HDB.

The cases were recruited only in the department of dermatology which excluded the cases of the other centers. Some patients were uncooperative during their interview for data collection. Despite these limitations, this work makes a substantial contribution to the knowledge of the delirium of infestation in Mali. We reported a large number compared to some studies 73 cases in one year, in Burkina Faso 3 observations in 2018.[7] In 2013 in Tunisia, Jawaher et al[6] published an article on a case. The average age of our cases was 52-years-old. The age group (25-64) was the most reported. The female sex was the most represented at 62% with a sex ratio of 0.6. This female predominance has been reported by several authors.[8] The profile is that of a woman over 50-years-old. In our series, a statistically significant difference appears between the two sexes according to marital status (p=0.001), these are widowed or divorced women. This state is explained by the absence of the spouse who culturally exerts a weight on the personality of the patient and thus plays a role in the appearance of the symptoms of the disease. In our society the divorced woman is confronted with real social pressure, social isolation has been described as a contributing factor by many authors.[9,10] Further work with another methodological approach is needed to substantiate the issue of female predominance. Among our cases 8% was known in psychiatry. Psychiatric care is in fact underdeveloped in our country; the only specialized center is in the capital Bamako. Many patients do not consult psychiatry because of many prejudices as already described by several authors.[11] There was a strong conviction of parasitic infestation in the majority of our cases, i.e. 89%, this level of conviction has been described by some authors.[9,12] We can consider this strong conviction as the element that underlies the delirium of infestation pushing some patients to bring back organic debris or skin flaps to try to convince the doctor, this is the sign of the specimen. In our series, this sign was found in 89% of our cases. It was essentially composed of ants, cicadas, earthworms and flies. These described pathogens were similar in most authors.[13] The presence of this sign did not depend on the degree of conviction of the infestation (p=0.8). Skin lesions were found in 20% of our cases, these are excoriations, ulcerations or lichenifications. These lesions may be due to self-inflicted trauma or the consequence of an attempt at a self-prescribed solution by the patient, it constitutes a witness of severity. In our series 69.86% of our cases had received antiparasitic as treatment prior to the consultation in dermatology; this demonstrates the lack of knowledge of the management of this pathology by health workers. Several authors group the delusions of infestations into two phases: the primary monothematic forms only limited to the skin and the secondary forms with psychiatric involvement.[10] In our series, the primary forms were predominant. This can be explained by recruitment in a dermatological environment, and a certain reluctance of patients or caregivers to consult a psychiatrist.

CONCLUSION

Delirium of skin Infestation is generally considered a rare disease, increasingly observed during our dermatology consultations. Its frequency is probably underestimated. It affects twice women as men and there are often certain pre-morbid characteristics, such as social isolation. Our study has established that the epidemiological and clinical profile of delirium of infestation is similar to data in the literature. Further studies are needed to substantiate risk factors for the disease.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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