

Secondary Ekbom Syndrome to organic disorder: report of three cases

Síndrome de Ekbom secundária a transtorno orgânico: relato de três casos

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Abstract: The Ekbom syndrome, also known as delusion of parasitosis or acarophobia is an obsessive phobic state in which the patient thinks, imagines or believes that his or her skin is infested by parasites. In the hallucinatory state, he/she removes parts of the skin, identifying them as parasites. It can be primary or secondary to other organic or psychiatric diseases. Generally speaking these patients take a long time to seek for medical support and the dermatologist is almost always the first physician to see them. Here we describe three patients with delusional parasitosis associated with organic disorders.

Keywords: Delirium; Dermatology; Pruritus; Psychiatry

Resumo: A Síndrome de Ekbom, também conhecida como delírio de parasitose ou acarofobia, é um estado fóbico obsessivo no qual o paciente pensa, imagina ou acredita que está infestado por parasitas na pele. Em estado alucinatório, retira fragmentos de pele, identificando-os como parasitas. Pode tratar-se de um quadro psiquiátrico primário ou secundário a outros transtornos orgânicos. Geralmente, esses pacientes demoram a procurar ajuda médica, e o dermatologista, quase sempre, é o primeiro profissional procurado. Descrevemos o caso de três pacientes dos quais apresentaram delírio de parasitose, associados a transtornos orgânicos.

Palavras-chave: Delírio; Dermatologia; Prurido; Psiquiatria

INTRODUCTION

Described initially by Thiberge in 1894 with the term acarophobia, the syndrome was defined in 1938 by Ekbom, which named it after him. Also known as delusional parasitosis, psychogenic parasitosis, the Ekbom syndrome is a disease not frequently found. It is characterized by a firm conviction of the patient that he/she is infested by parasites which come out of his/her skin, in general scalp, mouth, eyes or genital region.^{1,2}

The majority of the patients are women, elderly or presenile and with pre morbid social isolation.¹ Lyel describes the relation 1:1 man:woman, below 50 years of age and 1:3 above 50.² The average age at the beginning of the disease is 55,6 years.

The beginning of the symptoms can be violent or

slow and with complaints of sensation of pruritus, twinge, a sensation of movement within the skin, formication or tactile hallucination, which unleashes the sensation of parasitism. Cutaneous lesions are frequent, including discreet bruises, nodular pruritus and even ulcers and scars, localized more or less symmetrically and produced by the patient when trying to extract the parasite from the skin. Patients recount obsessively, in details, the morphology, the vital cycle and habits of such parasites as well as their attempts to get rid of them. Some, in hallucinatory state, collect pieces of skin, paper or other specimen, identifying such fragments as parasites. This behaviour has been denominated "box of matches signal".^{3,4}

There are many psychiatric disorders associated

Received on 03.08.2009.

Approved by the Advisory Board and accepted for publication on 18.12.2009.

* Work carried out in the Dermatological Service of the Lauro de Souza Lima Institute (ILSL) - Bauru (SP), Brazil.

Conflict of interest: None / *Conflito de interesse: Nenhum*

Financial funding: None / *Suporte financeiro: Nenhum*

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such as anxiety, phobia, hypochondria, non-organic and organic delirious disorder that may become more complicated due to depression or psychosis. Delirium with a paranoia feature can be seen in 15 to 40% of the cases and it can develop, more frequently, in personalities with obsessive and paranoid traces. This description leads some authors to consider parasitosis delirium as a monosymptomatic hypochondriac psychosis⁵

In the extensive discussion about the true nature of delusional parasitosis Ekbom discusses especially the nature of tactile sensations described by patients, suggesting an organic base for the syndrome, raising questions whether they would be a distortion of real perceptions or an hallucinatory disorder.⁶ Besides that, some cases are generally accepted as being associated with organic diseases like hypothyroidism, hipotireoidismo, diabetes, cortical lesions, mental retardation, severe anemia, some infections like HIV and syphilis, as well as intoxications.⁵

CASE REPORTS

Patient 1: Female, 25 years old, black, presenting for approximately 4 months ulcerations on the mammas (Pictures 1 and 2). Reported that the lesions had been caused by “parasites” that were moving on her mammas. She also presented a secondary mental retardation due to meningitis. The following exams were asked: hepatic function, renal function, electrolytes, thyroidal function and haemogram which were normal. It was prescribed Pimozide 2mg/day, and it was also requested a psychological evaluation and psychotherapy. Clinical improvement was observed in approximately 8 weeks. After 2 years the pimozide dose was adjusted to 1mg/day and the



FIGURE 1: Ulcerated lesions on the breasts, more intense to the left, corresponding to the area of the dominant hand



FIGURE 2: A close picture of ulcerated lesions

patient has not presented lesions for approximately 5 months.

Patient 2: Male, 73 years old, white, presenting pruritus and who believed that there were parasites moving on his buttocks, lower limbs and scalp for 10 months. The patient presented coronary disorder, and was taking atenolol, enalapril, AAS and simvastatin. The following exams were requested: hepatic function, renal function, thyroidal function and electrolytes. Alterations were found only in the haemogram and ferrokinetics, compatible with anemia. So, it was prescribed Risperidone 1mg/day and Iron replacement. Remission of the symptoms was observed after 2 months and, in the 7th month, the medication was suspended due to a total clinical improvement of the condition and to the fact that the patient did not present any relapse after 2 months of follow up.

Patient 3: Female, 78 years old, white, presented ulcerations and bruises on the face (Picture 3), lower limbs (Picture 4) and dorsum (Picture 5). The lesions were produced in an attempt to remove destroy the “parasites” that had been moving around her skin for approximately 3 years. Laboratory exams did not show any alterations in the renal and hepatic functions, in the electrolytes as well as in the haemogram but they showed hypothyroidism. It was prescribed Pimozide 1mg/day and replacement of the thyroid hormone. However, as the patient did not present satisfactory therapeutic response it was added to the treatment Amitriptyline 25mg/day and the Pimozide dose was slowly increased, in 1mg/day/month, reaching 4mg/day. Under these conditions there was remission of the symptoms after 3 months of treatment, and therefore it was initiated the decrease of the medications. There were relapse episodes on the first years of treatment when the



FIGURE 3: Various bruised and ulcerated lesions on the face, produced by the patient trying to eliminate the “parasites” that were moving on the skin



FIGURE 5: Various bruised lesions, ulcerated on the superior part of the dorsum

Pimozide dose was 1mg/day. In this period of time it was increased the Pimozide dose to 2mg/day. When the remission was reached the dose was decreased to 1 mg/day and after 3 months following the case there was not a new relapse.

DISCUSSION

The Ekbom syndrome is relatively rare, with prevalence of approximately 83,21 in one million inhabitants. Referred to in DSM-IV as delirious somatic disorder, a form of delirious disorder and when secondary to an organic disorder corresponds to a psychotic disorder caused by general medical conditions. Some cases are associated to organic diseases like hypothyroidism, diabetes, cortical lesions, mental retardation, kidney failure, hepatitis, severe anemia, intoxication by medication and cardiopathies.^{1,3,7-9} There is a variety of psychiatric disorders associated such as anxiety, phobia, hypochondria and depression. Various organic



FIGURE 4: Bruised lesions on the legs, being some deeper ulcerations

psychoses can mimic the Ekbom syndrome, including the abuse of substances such as cocaine and amfetamines, dementia, neoplasias, cerebrovascular diseases and vitamin B12 deficiency. Some of these disorders produce cutaneous symptoms, especially pruritus, which might contribute to the beginning of the delirium.¹⁰

In 1978, Skott analysed 57 patients with delusional parasitosis and found association with mental retardation in 8 patients, organic disorder in 24 and psychiatric disorder like paranoia and depression in 40% of the cases.⁷ According to Ekbom it can also occur deterioration of the cerebral functions in the ageing process.^{3,6} To Nagarathnam and O’Neile, there would not be an specific cerebral area associated to delusional parasitosis, however, the majority of the related lesions occurred in subcortical structures. The reported patients presented secondary delusional parasitosis to mental retardation condition (patient 1), anemia and cardiopathy (patient 2) and hypothyroidism (patient 3), suggesting that the organic manifestations are really associated with a delusional condition, and that they can even be the unleashing factor or even cause it.^{3,6,7}

So, patients should be carefully evaluated, differential diagnoses should be excluded and above all there should be a search for organic disorders that are associated.¹⁰ Johnson recommends appropriate laboratory evaluation— haemogram, urinalysis, hepatic function, renal function, thyroidal function, electrolytes, glycaemia, and serum levels of vitamin B12 and folate – mainly when the clinical condition suggests organic disorder.³

The preconized treatment is with antipsychotic being Pimozide the first choice maybe due to its additional capacity to block the opioid receptors and thus the sensation of pruritus. Sixty to 80% of the

patients responded to the treatment presenting symptomatic improvement within 2 weeks, although many months might be necessary to the complete control.^{3,9-15} The reported patients needed two more weeks of treatment with psychopharmacology to the remission of the condition as already referred to by many authors¹¹⁻¹⁵ and responded to small doses of Pimozide, as referred to by Lee who does not recommend doses higher than 6mg/day.¹⁵ Cardiac alterations, with increase in the QT interval, impose a greater precaution when used in patients suffering from cardiopathies and carriers of cardiac blockings or using other drugs that also cause alterations in the cardiac conduction.^{3,15} Facing this situation, we opted for prescribing Risperidone, for patient 2, who presented cardiopathy and was using Betablocker, as such adverse effects are less common with this drug and less pronounced. Antidepressant can be

prescribed in monotherapy or in combination with Pimozide, in patients with associated depressive symptoms as patient 3.^{3,7,11,15} Besides that, it is indispensable to treat the unlashin organic disorders whenever it is possible.

However, the greatest challenge is to obtain from the delirious patient his/her acceptance to begin the medicamental treatment as, in general, they are reluctant to accept that they are carriers of a psychiatric pathology. Normally, it is easier for the patient to accept the treatment prescribed by the dermatologist than by a psychiatrist.¹⁴ The dermatologist is frequently the first professional such patients seek, showing though the importance of knowing such syndrome. So, it is fundamental for the dermatologist to have a broader knowledge of psychodermatology and of psychopharmacology. □

REFERENCES

- Ipele.com [homepage]. Martelli AC. Ipele. São José do Rio Preto: Dermatoses psiquiátricas; [acesso 13 Mar. 2009] Disponível em: <http://www.ipele.com.br/livro/capitulo>.
- Lyell A. Delusions of parasitosis. *Br J Dermatol*. 1983;108:485-99.
- Koo J, Lee CS. Delusions of parasitosis a dermatologist's guide to diagnosis and treatment. *Am J Clin Dermatol*. 2001;2285-90.
- Larsson CE, Otsuka M, Balda AC. Delírio de parasitose (acarofobia): relato de caso em São Paulo(Brasil) *An Bras Dermatol*. 2000;75:723-8.
- Munro Alistair monosymptomatic hypochondriacal psychosis manifesting as delusions do parasitosis. A description of four cases successfully treated with pimozide. *Arch Dermatol*. 1978;114:940-3.
- Ekbom KA. Der prasenile dermatozoenwahn. *Acta Psychiatr Neurol* 1938; 13:227-59.
- Slaughter JR, Zanol K, Rezvani H, Flax J. Psychogenic parasitosis a case series and literature review. *Psychosomatics*. 1998;39:491-500.
- Le L, Gonski PN. Delusional parasitosis mimicking cutaneous infestation in elderly patients. *Med J Aust*. 2003;179:208-9.
- Szepietowski JC, Salomon J, Hrehorów E, Pacan P, Zalewska A, Sysa-Jedrzejowska A. Delusional parasitosis in dermatologica practice. *J Eur Acad Dermatol Venereol*. 2007;21:462-5.
- Shelley WB, Shelley ED. Delusions of parasitosis associated with coronary bypass surgery. *correspondence. Br J Dermatol*. 1988;118:309-310
- Lepping P, Freudenmann RW. Delusional parasitosis: a new pathway for diagnosis and treatment. *Clinical and Experimental Dermatology*. 2007;33:113-7.
- Zanol K, Slaughter J, Hall R. An approach to the treatment of psychogenic parasitosis. *Int J Dermatol*. 1998;37:56-63.
- Driscoll MS, Rothe MJ, Grant-Kels JM, Hale MS. Delusional parasitosis: A dermatologic, psychiatric, and pharmacologic approach. *J Am Acad Dermatol*. 1993;29:1023-33.
- Lindskov R, Baadsgaard O. Delusions of infestation treated with pimozide: a follow-up study. *Acta Derm Venereol (Stockh)*. 1985;65:267-70.
- Lee CS. Delusions of parasitosis. *Dermatologic therapy*. 2008;21: 2-7.

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How to cite this article/*Como citar este artigo*: Alves CJM, Martelli ACC, Fogagnolo L, Nassif PW. Secondary Ekbom Syndrome to organic disorder: report of three cases. *An Bras Dermatol*. 2010;85(4):541-4.