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Endemic Trichophytosis in Brazilian Pemphigus Patients

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The clinical evolution of patients with Brazilian Pemphigus Foliaceus (Fogo Selvagem) has changed substantially in the last 15 years as a result of its treatment by corticosteroids. This produced a marked clinical improvement in patients and increased the number of discharges from the hospital and markedly reduced the death rate. On the other hand, in a considerable number of inpatients under prolonged use of steroids who have presented a clinical remission of the disease have developed a skin condition which had not been seen before such as dissemination of infectious and parasitical dermatosis such as scabies, warts, pyoderma, herpes simplex and specially dermatophytosis. Our attention was drawn to the high prevalence of dermatophytosis and to the extraordinary exuberance of the lesions. We believe that the problem of dermatophytosis in Brazilian Pemphigus Foliaceus is an expression of fungal opportunism and it is important to note that there are few reports on fungal opportunism by *Trichophyton*. A synthesis of the literature is shown in table I.

Table I: Opportunism by dermatophytes
Synthesis of the literature

Author	Basic disease	N. of cases	Steroid or ACTH therapy	Isolated fungus
LEWIS et al.	Lymphoblastoma	three	no	<i>T. rubrum</i>
PILLSBURY & JACOBSON	Cushing's syndrome	one	no	<i>T. rubrum</i>
	Thrombocitopenic purpura	two	yes	<i>T. mentagrophytes</i>
CREMER	Cushing's syndrome	two	no	<i>T. tonsurans</i>
WILSON & Mc NIECE	Cushing's syndrome	one	no	<i>T. rubrum</i>
CANIZARES et al.	Cushing's syndrome	three	no	<i>T. rubrum</i>
OBERMAYER	Monocytic leukemia	one	no	<i>T. rubrum</i>
CALLAWAY	Aleukemic lymphatic leukemia	one	no	<i>T. rubrum</i>
FERGUSON et al.	Lymphoma	one	yes	<i>T. rubrum</i>
SYMMERS	Lymphatic leukemia	one	yes	<i>T. rubrum</i>

Material and Methods

One hundred and thirty four inpatients of the Serviço do Pênfigo Foliaceo (Pemphigus Foliaceus Hospital, São Paulo, Brazil) were examined in March and April of 1968 for the presence of suspected lesions of dermatophytosis. The material obtained by scraping of skin scales and or nails was examined microscopically after clarification by KOH and cultured in Sabouraud dextrose agar with chloramphenicol and cycloheximide.

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Results

The tables II, III, IV, V, VI and VII show our results. The only fungus isolated was the *Trichophyton rubrum* which was cultured from 25 cases.

Table II: General data from the examined patients

Number of examined patients	134
Males	69
Females	65
With clinical diagnosis of dermatophytoses	55
With laboratorial confirmation	36
Males	21
Females	15

Table III: Distribution according the age and sex

Age	N. of patients	Male	Female
0—10	1	1	0
10—20	7	3	4
20—30	13	6	7
30—40	11	6	5
40—50	4	4	0
	36	20	16

Table IV: Distribution according to race

Caucasian	21
Others	15

Table V: Duration of the Phempigus and dermatomycosis

Years	N. of patients
0—3	7
3—6	10
6—9	8
9—12	8
12—15	2
15—18	1
+ 18	0

Table VI: Daily maintenance dose of triamcinolone in patients with dermatomycosis

Dosis (mg)	N. of cases
24	1
20	3
16	8
12	7
8	7
4	6
0	4

Discussion

The high prevalence of dermatophytosis (*Trichophyton rubrum* infection), which we have observed in patients hospitalized together for prolonged periods, in close contact and on similar schedules of steroid therapy could be the results of one or several factors.

Table VII: Clinical varieties of dermatophytosis

Clinical variety	N. of cases	
"Tinea corporis"	22	
Multiple lesions	21*	* One patient with lesions involving the scalp
Solitary lesion	1	
"Tinea cruris"	6	** Three patients with more than one localization
"Tinea unguium"	6	
"Tinea pedis"	4	
"Tinea manuum"	1	
	39**	

1. It is unlikely to be a consequence of the Brazilian Pemphigus Foliaceus because, when the patients first arrived in hospital, even those who had the disease for a long time, they had no clinical evidence of dermatophytosis and this problem was never observed before the steroid era.

2. It cannot result exclusively from the steroid therapy because dermatophytical opportunism has rarely been described in the various conditions treated with maintenance doses of steroid. In addition, all the patients of the hospital were under a similar schedule of therapy and only 26,8 % showed dermatophytosis.

3. It must not be a result of medicamental Cushing's syndrome but we believe that probably there is a correlation between them. During our study we found that 41 of all the patients of the hospital (134), showed clinically evident Cushing's syndrome and from them only three were free from dermatophytosis.

4. The lymphomas and myelosis have been referred as basic disease for fungal opportunism (5, 8, 10, 12, 13). In Brazilian Pemphigus Foliaceus the hematological data shows lymphocytosis in the peripheral blood and in the bonemarrow (6) which could have some relation with the fungal opportunism. Actually, no one of those factors alone can be considered responsible for the fungal opportunism. It is important to emphasize the opinion of NELSON & McNIECE (9): "those patients who have had mycotic infections adversely affected by adrenal steroids have either a severe underlying disease for which the steroids were administered, or have excessive endogenous steroid secretion. Either condition could cause decreased host resistance, rather than increased virulence of the fungus which allows for the severe generalized spread of the infection".

UTZ (14) considers the circumstances in which there is a fungal opportunism, both pathogenic and saprophytic. He includes corticosteroid therapy as one, but does not mention particularly the dermatophytical opportunism.

In Brazilian Pemphigus Foliaceus the dermatophytosis could be a result of a combination of factors according to the conception of NELSON & McNIECE (9), but we must remember that Brazilian Pemphigus Foliaceus is a disease in which auto-immunity plays a role in the pathogenesis (1, 7). In face of these considerations we intend to reinforce the idea of NELSON & McNIECE (9) and Canizares et al. (3) that the dermatophytical opportunism could result from a basic immunological disorder as a result of defects acting in conjugated ways such as: Lymphoid-reticular system disease, endogenous immunological depression (Cushing's syndrome) or exogenous immunological depression (prolonged steroid therapy), autoimmune disease and perhaps other immunological defects, congenital or acquired.

In our paper we emphasize the possibility of a combination of, at least, two factors: the basic disease and a prolonged steroid therapy.

Summary

Occurrence of an endemic trichophytosis in patients of the Pemphigus Foliaceus Hospital in São Paulo, Brazil, is presented. Clinical examination of all inpatients followed by mycological examination of those presenting lesions suggestive of dermatophytosis showed that 26,9% (30 patients) were infected by *Trichophyton rubrum*. The results are discussed and in analogy with the literature, it was found that in the *Trichophyton* endemy there is the concurrence of, at least, two factors, a basic disease and a prolonged steroid therapy. The authors believe that their observations are an example of opportunism by dermatophytes.

Resumen

La comunicación versa sobre la ocurrencia de dermatofitosis endémica en los pacientes de pénfigo foliáceo brasileiro internados en el hospital especializado.

El examen clínico de todos los pacientes internados y el examen micológico de los casos sospechosos de dermatofitosis reveló que el 26,9% de la población doliente del hospital estaba infectada por el *T. rubrum*.

Analizando los resultados y comparando con los de la literatura acreditan que esta epidemia tricofítica, es un ejemplo de oportunismo de los dermatofitos.

En ella deben actuar conjuntamente dos factores: una dolencia base, en este caso el pénfigo foliáceo y la corticoterapia prolongada.

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