Superficial mycoses in Paraíba: a comparative analysis and bibliographical revision

Micoses superficiais na Paraíba: análise comparativa e revisão literária

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Abstract: A survey of the incidence of clinically diagnosed cases of superficial mycosis was carried out using individual report cards in four Family Health units in Patos-PB, in 2007. We had a sample of 197 positive records with Pityriasis and Tinea as the most incident mycoses. There was a higher prevalence among female patients who were between 11 - 20 years of age. A high number of non-identified infections was found: 46,19%. The identification of the agents of such non-identified infections is not possible as they are not infections of compulsory notification.
Keywords: Incidence, Mycoses, Pityriasis, Tinea

Resumo: A partir de fichas individuais, fizemos um levantamento da incidência de casos de micose superficial, diagnosticadas sob o ponto de vista clínico em quatro Unidades de Saúde da Família de Patos-PB, no ano de 2007. Tivemos uma amostra de 197 notificações positivas, onde as mais incidentes foram: Pitiríase e Tínea, sendo a maior prevalência na faixa etária de 11 a 20 anos e o sexo feminino, o mais acometido. Um número elevado de infecções não identificadas foi encontrado: 46,19%, no entanto, a identificação destes agentes torna-se inacessível, por não serem infecções de notificação obrigatória.
Palavras-chave: Incidência; Micoses; Pitiríase; Tinha

Brazil is a country that has high rates of infections caused by fungi, mainly superficial mycoses, due to its tropical climate and this factor added to others are determinant to the uprising of micro epidemics.[1,2] Superficial mycoses develop alterations only in the most superficial layer of the stratum corneum and do not induce, most of the time, any inflammatory response in the host. The fungi that cause these infections prefer the most external part of the skin, around the hair or nails, nourishing from a protein called keratin. The main defense mechanism against fungi is developed by the phagocytes. Some family diseases facilitate the clinical development of mycosis, due to deficiency of the immune system, such as in diabetes, HIV and depression. The use of some drugs such as immunosuppressants and antibiotics[1,3,4] also facilitates the developmen of them. The main superficial mycoses in men are: Piedra negra (*Piedrae hortae*), Piedra branca (*Trichosporon* sp.), Pityriasis versicolor (*Malassezia* sp.) and Tinea nigra (*Phaeoannellomyces werneckii*).

Particularly, in the northweast region of Brazil,

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dermatoses are more frequent, on the coastal regions, represented by dermatophytoses and Pityriasis Versicolor (PV), due to the high temperatures and humidity of such regions. Researches are still insufficient in Paraíba although it is known that there are factors in the state that contribute for the development of such microorganisms.[5]

Such infections are not diseases of compulsory notification so, it is not known exactly, the extension of the problem. This fact shows the need to carry out periodic surveys to know exactly the frequency of the diseases and its etiologic agents, considering socioeconomic, geographic and climatic factors as a preventive epidemiological measure.[1,4]

Piedra negra (*Piedraia hortae*)

It is an asymptomatic and not very frequent infection caused by fungi, restricted to the beard, moustache, hair and hardly on the axillae. It is characterized by dense and black nodules, of variable size and usually easily visible.[1]

Piedra branca (*Trichosporon sp*)

Piedra branca is caused by a fungus of the *Trichosporon* type, characterized by the presence of light nodules, loosely adehering to the hair, localized mainly by the pubic and scrotal hair and hardly by the beard, moustache, axillae and hair.[6]

Pityriasis versicolor (*Malassezia* sp.)

Species of this genus are part of the normal microbiota of the skin, in its yeast phase and by mechanisms not well known yet they would change to a filamentous form becoming pathogenic.[1,6] Clinically, the PV is characterized by nummular or guttate macules or plaques, yellowish, greyish or hypochromic, especially affecting shoulders and the upper part of the chest of young adults (thorax, abdomen, neck and less frequently axillae,groins and thighs) that markedly transpire.[7]

Onychomycoses

Having as main etiologic agents *Candida* spp. and the *Trichophyton rubrum,* onychomycosis is a nail fungal infection that can be caused by dermatophytes, yeast or non-dermatophyte filamentous fungi that affect the nails of the hands and feet.[8]

Dermathophytosis

Dermatophites constitute the group of fungi more frequently isolated in mycology laboratories.[9] In parasitic life they have the capacity to invade keratinized tissues of human beings and other animals causing infections named dermatophytoses. The etiologic agents of dermatophytoses belong to the genus *Trichophyton*, *Microsporum* and *Epidermophyton* and constitute one of the most frequent groups of fungal infections in dermatology practice.

It was carried out an exploratory study with qualitative and quantitative outline and involving individuals who were cared for in the Family Health Units chosen for this study (Aderban Martins, Dircê Xavie, Horácio Nóbrega e Rita Palmeira) from the municipality of Patos-PB, from January to December, 2007 and with confirmed diagnosis of superficial mycosis based exclusively in clinical exams carried out by health pro-

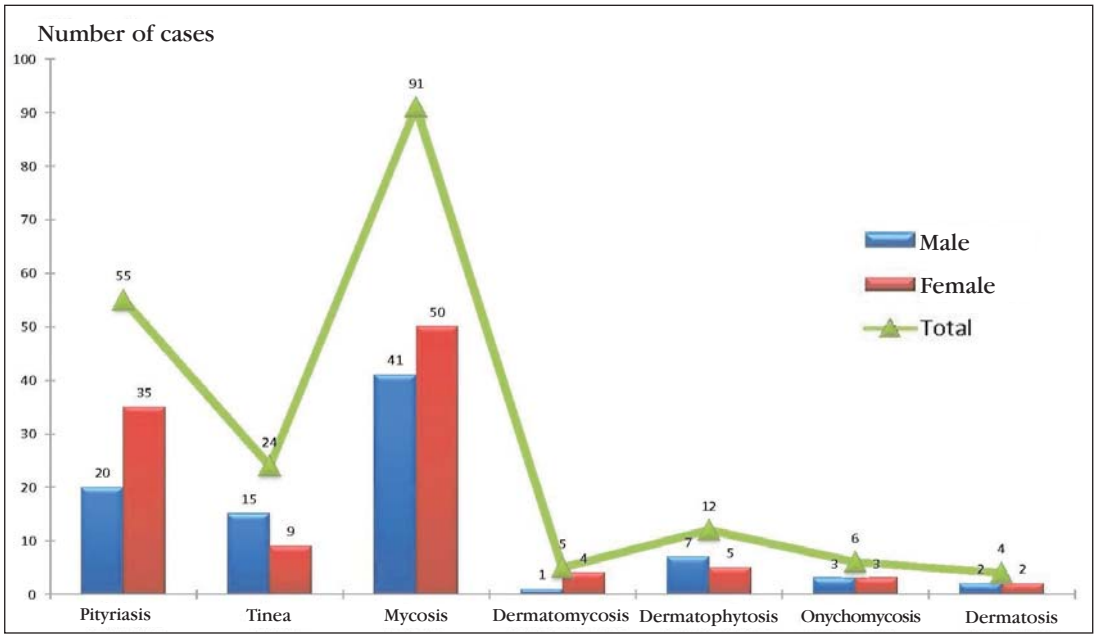
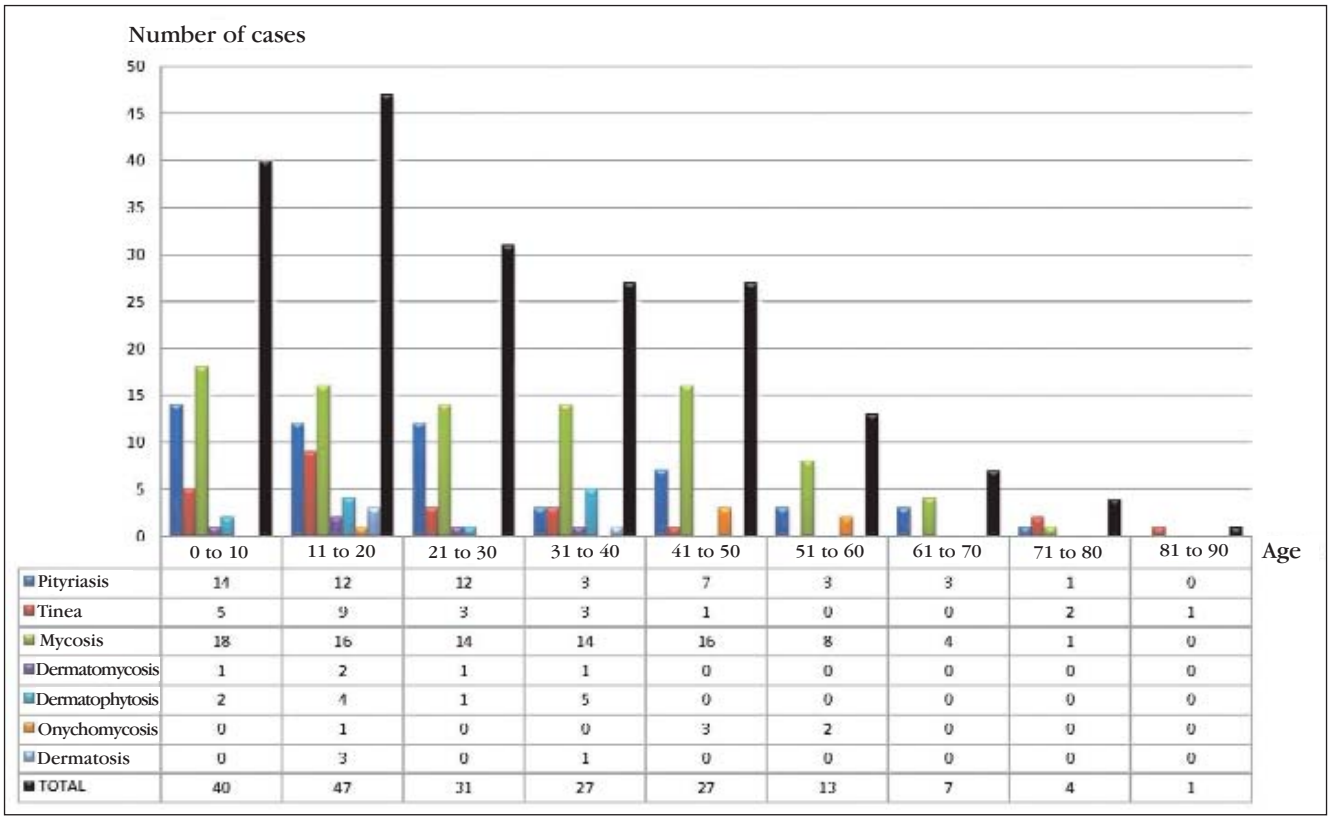


Gráfico 1: Incidence of the superficial mycoses in respect to the sex



	0 to 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90
Pityriasis	14	12	12	3	7	3	3	1	0
Tinea	5	9	3	3	1	0	0	2	1
Mycosis	18	16	14	14	16	8	4	1	0
Dermatomycosis	1	2	1	1	0	0	0	0	0
Dermatophytosis	2	4	1	5	0	0	0	0	0
Onychomycosis	0	1	0	0	3	2	0	0	0
Dermatosis	0	3	0	1	0	0	0	0	0
TOTAL	40	47	31	27	27	13	7	4	1

Gráfico 2: Superficial mycoses in different etárias bands

fessionals of each health unit researched.

Our sample had 197 individuals with 45,18% (89 cases) of them from the male sex and 54,82% (108 cases) from the female sex. Women were more affected by the mycoses studied corroborating further studies.[4,9] There was a greater number of positive diagnosis for Pityriasis - 27,92% (55 cases). From this total number, 63,64% (35 cases) are female patients and 36,36% (20 cases) are male patients. As for Tinea, we had a total number of 12,18% (24 cases). From this number 62,50% (15 cases) were male patients and 37,50% (9 cases) were female patients (Graph 1), in accordance with previous works.[10] Age varied from early months of life until 83 years. Mycoses accured in the age groups that varies from 11 to 20 years of age (23,86% - 47 cases) and from 0 to 10 years of age (20,30% - 40 cases). These 2 groups are responsible for almost 50% of the cases (44,16% - 87 cases) showing the susceptibility of children and young people to contagion (Graph 2). It was also observed a higher incidence of Pityriasis among men within the age group that varies from 0 to 10 years (Graph 2). Whithin the group of mycoses which were not compared according to genus the dermathophytoses had higher prevalence (6,09% - 12 cases) followed by onychomycoses (3,05% - 6 cases), dermatomycoses (2,54% - 5 cases) and lastly by dematoses (2,03% - 4 cases). From this group 46,19% of the infections (91 cases) were identified only as mycosis. There is no information about genus or species which shows us that a laboratorial diagnosis would be indicated in such cases to confirm which mycosis we are dealing with and therefore to make use of specific drugs for specific mycosis in accordance with medical literature.[1]

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