Nosological profile in a dermatology referral center in the State of Amazonas - Brazil

Perfil nosológico de centro de referência em dermatologia no estado do Amazonas - Brasil

Adriana Andrade Raposo¹
Antônio Pedro Mendes Schettini²
José Carlos Gomes Sardinha¹
Valderiza Lourenço Pedrosa³

Abstract: BACKGROUND: Skin diseases are associated with high morbidity, low mortality and low rate of hospitalization. However, they can cause considerable interference in physical and emotional well-being of the individual. Several of them reach large population, requiring specific interventions for their control.

OBJECTIVE: To describe the frequency of skin disease diagnosed in the dermatology service in Manaus, capital of Amazonas State.

METHODS: We collected data on registered sex, age, origin and diagnostics for the first consultation of patients attended between January 2000 and December 2007.

RESULTS: Of the 56.024 recorded visits, we obtained 56.720 cases of dermatological diagnoses, being the most common sexually transmitted diseases (25,12%), allergic skin diseases (14,03%), unspecified dermatoses (13,01%), leprosy (6,34%) and acne, seborrhea and related diseases (5,05%). The frequency was similar for both sexes, aged 20-29 years predominated and Manaus the origin most reported.

CONCLUSIONS: The pattern of skin diseases identified in this study may serve as a baseline to managers of health system in the region develop strategies for prevention and control of dermatoses, with emphasis on sexually transmitted diseases, allergic skin diseases, leprosy and acne.

Keywords: Dermatology; Epidemiology; Sexually transmitted diseases; Skin; Skin diseases

Resumo: FUNDAMENTOS: As doenças de pele estão associadas a alta morbidade, baixa mortalidade e baixa proporção de hospitalização. Entretanto, podem causar considerável interferência no bem-estar físico e emocional do indivíduo. Várias delas atingem grandes contingentes populacionais, havendo necessidade de intervenções específicas para seu controle.

OBJETIVO: Descrever a frequência das dermatoses diagnosticadas em serviço de dermatologia na cidade de Manaus, capital do estado do Amazonas.

MÉTODOS: Coletaram-se dados registrados sobre sexo, idade, procedência e diagnósticos referentes à primeira consulta dos pacientes atendidos entre janeiro de 2000 e dezembro de 2007.

RESULTADOS: Das 56.024 consultas registradas, obtiveram-se 56.720 diagnósticos dermatológicos, sendo mais comuns as doenças sexualmente transmissíveis (25,12%), as dermatoses alérgicas (14,03%), as dermatoses não especificadas (13,01%), a hanseníase (6,34%) e acne, seborreia e afins (5,05%). A frequência foi semelhante para ambos os sexos, a faixa etária de 20-29 anos foi predominante e Manaus foi a procedência mais referida.

CONCLUSÕES: O padrão das doenças cutâneas identificadas neste estudo pode servir como linha de base para que gestores do sistema de saúde da região desenvolvam estratégias de prevenção e controle das dermatoses mais comuns, com ênfase nas doenças sexualmente transmissíveis, doenças cutâneas alérgicas, hanseníase e acne.

Palavras-chave: Dermatologia; Dermatopatias; Doenças sexualmente transmissíveis; Epidemiologia; Pele
INTRODUCTION

The skin is the largest organ in the human body. Its extent and condition of external covering of the body allows an easy exposure to environmental aggression. In addition, several pathological processes in internal organs show skin manifestations. As a result, a large number of skin diseases is observed. In general, they are responsible for numerous visits to basic health units and are associated with high morbidity, low mortality and low rate of hospitalization. However, they can cause considerable interference in the physical and emotional well-being of the individual, leading to stress, anxiety and depression.

A study conducted in the UK found a prevalence rate of skin diseases of 22.5%, and eczema was most commonly found - 6.1% of cases. In the United States, 36.5% of patients seen in a basic health unit had at least one skin disease, with an average of 2.3 skin diseases per patient. In Bamako, the capital of Mali, it was identified that 11.7% of visits to specialized centers were due to skin diseases.

In Brazil, Bechelli found prevalence rates of skin diseases between 21 and 81% in a study conducted with school-age children in the area of Vale do Purus, in the state of Acre, in 1981. Talhari et al., from 1979 to 1982, detected 95,267 cases of skin diseases among 100,939 students in the state of Amazonas. In 1985, Pizzol found that 30.5% of the diagnoses made by doctors in day care centers in the municipality of Viana, in the State of Espirito Santo, were of skin diseases. In 2006, a census conducted by the Brazilian Society of Dermatology identified a total of 57,343 cases of skin diseases, with acne being the disorder most frequently observed.

Due to this high frequency, knowledge about the pattern of skin diseases in a region has great relevance for the planning of health policies. Since these patterns can vary from one country to another and even within a single city, as they suffer influences of genetic, racial, nutritional, cultural, climatic, social and economic factors, there is a need for local studies.

The frequency of diseases in a region may be determined by large-scale population surveys, but these are difficult to conduct because they are time-consuming and expensive. Studies in ambulatory and hospital services, despite not reflecting the exact situation of a disease in the community, provide indicators of the magnitude of the problem and can be used to develop strategies for its control.

There are few published studies on the frequency of skin diseases in Northern Brazil. In a research conducted on February 22, 2010 on the website of the Virtual Health Library, using the keywords dermatosis, frequency and Brazil, 52 articles were identified, but none were related to skin diseases in this region. In Pubmed, using the search words skin disease, frequency and Brazil, 1433 references were identified on January 3, 2010. When the location was changed to the Brazilian Amazon, the number of references dropped to 18, and most works dealt with leishmaniasis.

The purpose of this study was to describe the frequency of skin diseases diagnosed in a specialized treatment center located in Manaus. The profile of the patients was identified in relation to gender, age and place of origin, and the results were compared with those of other studies in Brazil and abroad.

Manaus, capital of the state of Amazonas, is located in northern Brazil at the confluence of the rivers Negro and Solimoes. It has an area of 11,401 km² and is considered one of the gates to the largest tropical rainforest: the Amazon. Its climate is equatorial, hot and humid, with an average annual temperature of 27 °C, relative humidity around 80% and average rainfall of 2,300 mm per year. It has two seasons: rainy (winter) and dry or less rainy (summer). Its population comprises 1,646,602 inhabitants (IBGE, 2007), which makes it the eighth most populous city in Brazil. It accounts for 98% of the economy of the State of Amazonas and 55% of the economy of Northern Brazil.

Alfredo da Matta Foundation (FUAM), located in Manaus, is the institution where this work was conducted. Inaugurated in 1955 with the purpose of providing outpatient care to patients diagnosed with leprosy, the foundation later expanded its services to assist patients with other skin and sexually transmitted diseases. In conjunction with the Tropical Medicine Foundation and Araújo Lima Outpatient Clinic at the Federal University of Amazonas, Alfredo da Matta Foundation is one of the reference services in secondary health care specialized in dermatology.

MATERIAL AND METHODS

A descriptive, retrospective study was conducted evaluating the frequency of skin diseases diagnosed at Alfredo da Matta Foundation from January 2000 to December 2007.

Information was obtained from the database of the Bureau of Epidemiology and Disease Control of the Foundation, in the archives of the Notifiable Diseases Information System (SINAN) and the archives of the Enhanced Surveillance System for Sexually Transmitted Diseases (STD-SIVA). The medical records evaluated refer to the patient’s first visit to the institution. Data on gender, age, place of origin and diagnosis were collected. Records showing...
more than one diagnosis per patient were found.

In these databases, the skin diseases diagnosed belonged to the following groups: acne, seborrhea and associated diseases, alopecia, bullous diseases, atopic dermatitis, allergic skin diseases, autoimmune skin diseases, viral skin disorders, dermatozoonosis, dyschromias, hereditary diseases, metabolic diseases, sexually transmitted diseases (STDs), leprosy, leishmaniasis, lichens, subcutaneous and deep mycoses, superficial mycoses, nevi, pyoderma, psoriasis, pityriasis rosea, cutaneous tuberculosis and other atypical cutaneous mycobacterial diseases, benign tumors, malignant tumors, and other unspecified infectious and noninfectious skin diseases. The group of other infectious and noninfectious diseases corresponded to diagnosed diseases that did not fit in any of the groups mentioned. Unspecified dermatoses referred to diseases not diagnosed at first visit.

As for STDs, data refer only to cases of cutaneous involvement presented in the form of condyloma acuminatum, herpes simplex, candidiasis, chancroid, lymphogranuloma venereum, syphilis and donovanosis, thus excluding urethral, cervical, and vaginal discharge and HIV infection.

RESULTS

Throughout the study, 56,024 patients were seen and 56,720 dermatological diagnoses were recorded. Of this total, 51.68% were women and 48.32%, men.

The age range 20-29 years was the most frequent (26.17%), followed by patients aged 10-19 years (19.26%), 50 years old or older (17.21%), 30 to 39 years (14.74%) and 40 to 49 years (11.2%). We identified 5,596 children under 10 years of age, corresponding to 9.63% of first-time medical visits.

89.32% of the patients came from Manaus, 4.63% from municipalities in the interior of the state of Amazonas and a small group, 1.19%, from other states. In 4.86% of the cases there was no record of place of origin.

STDs were the most diagnosed group (25.12%), followed by allergic skin diseases (14.03%), unspecified skin diseases (13.01%), leprosy (6.34%), and acne, seborrhea and associated diseases (5.05%) (Table 1).

The less frequent diseases were autoimmune skin diseases (0.83%), pityriasis rosea (0.54%), metabolic diseases (0.23%), bullous diseases (0.21%), subcutaneous and deep mycoses (0.16%), hereditary diseases (0.14%), and cutaneous tuberculosis and other atypical cutaneous mycobacterial diseases (0.06%).

Upon individually assessing the most frequent group in this study, that of STDs, we found that 14,071 patients were seen, with the same number of diagnoses recorded. Of these patients, 50.15% were men and 49.85%, women. The most frequent age range was that of young adults aged 20 to 29 years (46.02%), followed by children and adolescents aged 10 to 19 years (30.79%). As for place of origin, 90.34% of the patients reported coming from Manaus (Table 2).

Condyloma acuminatum was the most frequent diagnosis among STDs, affecting 53.48% of the patients, followed by herpes simplex (19.57%) and candidiasis (12.60%). Donovanosis was the least frequent, accounting for 0.06% of diagnoses (Table 3).

DISCUSSION

The higher incidence of STDs observed in this study differentiates it from other similar works, in which allergic skin diseases or acne are more common. In other studies, there is a predominance of infectious and parasitic skin diseases, but most of them exclude STDs from research. Since the service studied is a reference center for the treatment of STDs, this may have been bias that influenced the results found.

A survey conducted in 2005 in six Brazilian capital cities with men and women who sought treatment in STD clinics identified a prevalence rate of these diseases of 51.0%; 14.4% of the infections were of bacterial origin and 41.9%, of viral etiology. Taking into account the fact that a proportion of infected individuals are asymptomatic and many symptomatic cases may go unnoticed by both patients and doctors, the magnitude of the problem may be greater. STDs have great health importance because they may be related to cases of pelvic inflammatory disease, male and female infertility, cervical cancer, congenital and neonatal infections and increased risk of HIV infection.

Among STDs, condyloma acuminatum was the most commonly diagnosed disease, occurring in 53.48% of the cases. This is in agreement with data from the literature. In the aforementioned study, there was a high prevalence of HPV infection - 41.2% among men and women who sought care at STD clinics. When we considered only the results of Manaus, one of the six cities studied, the prevalence rate rose to 61.3%, the highest among these locations.

In another study conducted in Rio de Janeiro between 1998 and 2000, the prevalence rate of HPV DNA in women was 50.1%. The relevance of this information increases when we recall that there are HPV subtypes that carry a high risk of carcinogenicity and are associated with the development of intraepithelial neoplasms.

Allergic skin diseases were the second most diagnosed illnesses; cases of atopic dermatitis were...
not included in this group and were evaluated separately. In research conducted in South Africa, Saudi Arabia, and Greece, allergic skin diseases were the most common, identified with a frequency of 37%, 35.7% and 31.9% respectively, while in Iran and Nigeria, they were the second most common group, with 24.5% and 14% of the diagnoses. This has been associated with factors such as industrialization, increased use of chemicals in occupational and domestic environments, exposure to low quality products containing irritants and allergens, changes in diet, and extensive and uncontrolled use of drugs.

In Brazil, a study conducted at Santa Casa de Sao Paulo in 1977 showed the prevalence of eczematous dermatitis, which occurred in 30.25% of the reported cases. Despite the high prevalence of this disease, there are no specific programs to treat allergic dermatitis as there are for STDs and leprosy.

The group of unspecified skin diseases is in third place, affecting 13.01% of the patients. In these patients, we could not establish the diagnosis of the disease in the first visit; therefore, additional tests and clinical monitoring are probably necessary.

Leprosy was fourth in frequency distribution, being diagnosed in 6.34% of the patients examined. Since FUAM is also a reference center for the treatment of this disease, this may explain why it was one of the most commonly recorded diagnosis. In 2007, 729 new leprosy cases were diagnosed in the state of Amazonas, out of which 372 (51.0%) were from Manaus, with a detection rate of 2.15 cases/10000 inhabitants, an index still considered very high. However, there has been a downward trend in this indicator, since in 1987 the detection rate of leprosy in Manaus was higher, with 9.06 cases/10000 inhabitants.

Acne, seborrhea and associated diseases were the fifth most commonly treated diseases (5.05%). This could contrast with information from the Census of the Brazilian Society of Dermatology in 2006, in which acne was the most common disease (14%) and with studies conducted in South Africa in 1999 and in Saudi Arabia in 2000-2001, in which acne was the second most common disorder, with 15.9% and 12.75% of the cases, respectively. However, it is important to mention that only patients with moderate to severe acne are treated in the foundation.

Malignant tumors were detected in 3.91% of the patients treated. In a work conducted by Hartshorne in 1999 in South Africa, 2.8% of the skin diseases identified corresponded to malignant tumors, while in New Zealand in 1984, Oakley et al. showed that skin cancer was the primary skin disease treated in the public health care system, with 18.5% of cases. As for benign tumors, they were diagnosed in 3.37% of visits, a rate close to that of malignant tumors.

Leishmaniasis was found in 2.62% of the
patients at first visit and, in order of frequency, it was the eleventh disease treated overall. This may be related to the fact that, in Manaus, the reference service for the treatment of leishmaniasis is located in another institution.

Atopic dermatitis was recorded in 2.60% of cases. Studies that consider atopic eczema as a common dermatosis are generally conducted with the pediatric population, such as a study carried out in Switzerland by Wenk et al. which showed that this was the most prevalent disease in this population, with 33.5% of cases. In contrast, studies conducted in New Zealand and Australia showed a higher frequency of psoriasis, 7.6% and 6.6% respectively, showing that there may be variations in this pattern.

Psoriasis occurred in 2.33% of the patients, similar to data from the literature which estimates that between 1-2% of the population in Germany, Britain and the United States are affected. In contrast, studies conducted in New Zealand and Australia showed a higher frequency of psoriasis, 7.6% and 6.6% respectively, showing that there may be variations in this pattern.

The low frequency of dermatoozoonosis, pyoderma, viral infections and superficial mycoses contrasts with data from studies in other countries, where infectious and parasitic skin diseases were the most frequently diagnosed skin diseases. This may be related to the fact that the study in Manaus was conducted in a secondary health care service, and most patients with these diseases, considered simple, were referred to the primary care network for treatment. But this can also be related to the registration in databases that compute these diagnoses separately. When you add up all the results of groups of infectious and parasitic diseases reported separately, except for leprosy and sexually transmitted diseases, you get a total of 6,050 cases, representing 10.67% of visits; this group then becomes the fourth most frequently diagnosed dermatosis.

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condyloma acuminatum</td>
<td>7,525</td>
<td>53.48</td>
</tr>
<tr>
<td>Herpes simplex</td>
<td>2,754</td>
<td>19.57</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>1,773</td>
<td>12.60</td>
</tr>
<tr>
<td>Syphilis</td>
<td>1,586</td>
<td>11.27</td>
</tr>
<tr>
<td>Chancroid</td>
<td>350</td>
<td>2.49</td>
</tr>
<tr>
<td>Lymphogranuloma venereum</td>
<td>74</td>
<td>0.53</td>
</tr>
<tr>
<td>Donovanosis</td>
<td>09</td>
<td>0.06</td>
</tr>
<tr>
<td>Total</td>
<td>14,071</td>
<td>100.00</td>
</tr>
</tbody>
</table>

These results may serve as a baseline for health system managers to develop strategies for the prevention and control of skin diseases in the region, with particular emphasis on sexually transmitted diseases, allergic skin diseases, leprosy and acne.
REFERENCES