Tropical medicine rounds

Study of the skin disease spectrum occurring in an Afro-Caribbean population

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Abstract

Background There is a scarcity of recent up-to-date studies on the incidence of skin disease among Afro-Caribbeans.

Methods One thousand patients were retrospectively studied for the commonest diagnoses made over a 5-month period from January to May 2001.

Results The commonest skin diseases seen were acne vulgaris (29.21%), seborrhoeic eczema (22.02%), pigmentary disorders (16.56%), and atopic eczema (6.1%). Other notable common diagnoses included keratosis pilaris, tinea infection, hirsuitism, folliculitis keloidalis nuchae, viral warts, dermatosis papulosa nigra, and confluent and reticulate papillomatosis.

Conclusion The pattern of skin disease seen in the Afro-Caribbean population studied, more closely resembles those seen in developed countries than those seen in developing countries.

Introduction

In the Caribbean, skin disease is very common and accounts for significant morbidity in the population. The incidence of skin disease is affected by geographic, socioeconomic and genetic influences. The climate is tropical and the diverse racial heritage is derived from predominantly Africans, Asians and Caucasians through migration. This nonhomogenous group of people consists mostly of individuals with Fitzpatrick skin types IV to VI. There are over 30 Caribbean islands, which vary in their degree of development and economic status. Despite the number of islands in the Caribbean, a Medline search revealed only one single study carried out on the incidence of skin disease in the Caribbean between 1991 and early 2001, and this was conducted in Guadeloupe.[1,2] It is only by having a concise knowledge of the incidence of diseases affecting a population that effective planning of the distribution of healthcare resources can be carried out to meet the needs of the population and to institute preventative measures.[3] The purpose of our study was therefore to determine the most common dermatoses in a patient population from the largest English speaking Caribbean island, Jamaica.

Materials and Methods

We performed a retrospective study of the first 1000 patients attending the Musgrave Medical Center (a dermatologic center in Kingston, Jamaica) during a 5-month period from January to May 2001. Data on patient demographics and clinical diagnoses were derived from patient case notes during the specified time period. The patients had been assessed by two dermatologists during the 5-month period. The frequencies of the main diagnoses were determined, categorized, and tabulated.

Results

The data comprised 1376 diagnoses made over the 5-month period for the 1000 patients studied. Ages ranged from 4 months to 82 years, and there was a 65% female preponderance. The racial distribution is demonstrated in Table 1.

Of the 1376 diagnoses made, the 12 commonest diagnoses were acne vulgaris (29.21%), seborrhoeic dermatitis (22.02%), pigmentary disorders (16.41%), atopic eczema (6.1%), keratosis pilaris (2.18%), tinea infections (2.18%), hirsuitism (1.89%), folliculitis keloidalis (1.74%), viral warts (1.67%), dermatosis papulosa nigra (1.59%), confluent and reticulate papillomatosis (1.45%), and alopecia areata (1.23%). These and other common diagnoses are shown in Table 2. Less

Table 1 Racial distribution among studied patients

Race	Patients *n*	%
Afro-Caribbean	956	95.6
Caucasian	8	0.8
Indian	22	2.2
Chinese	14	1.4
Total	1000	100

Table 2 Frequency of diagnoses in the study population

Diagnosis	Frequency	%
Acne vulgaris*	402	29.21
Seborrhoeic eczema	303	22.02
Pigmentary disorders	228	16.56
Atopic and other eczemas	84	6.1
Keratosis pilaris	30	2.18
Tinea infections	30	2.18
Hirsuitism**	26	1.89
Folliculitis keloidalis	24	1.74
Viral warts	23	1.67
Dermatosis papulosa nigras	22	1.59
Confluent & reticulate	20	1.45
Alopecia areata	17	1.23
Pseudofolliculitis barbae	15	1.09
Psoriasis	13	0.94
Keloids	11	0.94
Pitiryasis versicolor	11	0.79
Varicose veins	11	0.79
Other	106	7.7
Total	1376	100.0

*Includes steroid induced, pomade and cosmetic acne;
**Includes hirsuitism resulting from any cause.

commonly seen diagnoses not listed in Table 2 but that fall under 'other' included lupus erythematosus, folliculitis decalvans, dissecting folliculitis, papular urticaria, rosacea, seborrhoeic warts, lichen planus, ochronosis, herpes simplex, sarcoidosis, blistering disorders, bacterial skin infections, and scabies.

Discussion

Acne vulgaris was the commonest diagnosis, which was in keeping with recent findings in a study conducted in Guadeloupe, where the incidence was 16.4%.[2] In the Afro-Caribbean populations there were specific types of acne that are worthy of mention. Besides acne vulgaris, these types include monomorphic steroid-induced acne, which was seen mainly among young adults as a result of misuse of potent topical steroids to lighten the skin. Another commonly seen type was pomade acne, which was seen as early as 10 years of age and results from excessive use of hair pomades. In this type, the lesions were predominantly around the hairline. Cosmetic acne resulting from heavy cosmetic use was seen in the young adult female and was mainly confined to the convexities of the cheeks.

Pigmentary disorders were also noteworthy with a frequency of 228 per 1000 patients. The commonest among these was postinflammatory hyperpigmentation secondary to acne vulgaris, eczema, lichen planus, nodular prurigo, and other inflammatory skin conditions. The severity of this postinflammatory hyperpigmentation may have had a psychologic effect leading patients in the study group to misuse topical steroids resulting in steroidal acne. Other pigmentary disorders included melasma, which was common among Indians, and solar lentigenes, common among Caucasian patients and persons of fairer complexion.

There was a noticeable trend among Afro-Caribbean people that follicular disorders predominated. These included acne, pseudofolliculitis barbae, folliculitis keloidalis nuchae, and folliculitis decalvans. This high incidence of acne keloidalis and folliculitis keloidalis nuchae may be attributed to genetically determined factors such as the C-shaped cross section of the hairs causing them to curl as they grow, and the tendency to over-heal after inflammation leading to keloid formation.

The Afro-Caribbean population is thought to be one of the most prone populations to sarcoidosis; however, until now no attempt has been made to assess the prevalence in this population.[4,5] Although our study is limited to a small patient population it does give some long-awaited insight as to how common the disorder is in the Afro-Caribbean population. From this study it is quite evident that the incidence of sarcoidosis is low (0.4%) in Afro-Caribbeans. This may be because of the changing trends in disease patterns over the years. What is also interesting is that sarcoidosis in this population has been documented to have 'exuberant and bizarre' presentations.[6] This was not found to be the case with the population we studied, as they presented with erythema nodosum, annular or nodular lesions confined to the head and neck.

Confluent and reticulate papillomatosis (Gougerot–Carteaud syndrome), a disorder previously thought rare,[7–9] was not uncommon in our patient population, as it comprised only 1.4%. The lesions were also quite extensive, involving both the chest and back.

When compared with other studies on the common dermatoses in blacks, the most commonly seen disorders among Afro-Caribbeans are similar to those found in other countries in the Western world. Halder *et al.*, in a fairly recent study, found that the most frequent dermatoses among blacks in Washington DC were acne vulgaris, seborrhoeic dermatitis, pigmentary disorders, alopecias, and fungal infections.[10] Mahe and Mancel reported similar findings in a study conducted on a Guadeloupe population, where acne, eczema and fungal infections were among the most common.[2] In a south-east London black patient population, Child *et al.* found similar patterns of disease.[11]

A study conducted in rural Tanzania by Hendersson *et al.* however, revealed that skin infections and infestations as well as nutritional deficiency associated skin diseases were most common.[12] Nutritional deficiency associated skin disease was not seen in our population, and this suggests a higher standard of living among our studied patients. The predominance of infections and infestations that was found in an Indian primary healthcare study population by Paramajit *et al.*[13] was also not noted in our population, and this may suggest a better socioeconomic background among the Afro-Caribbeans we studied. It is important to note that our study population

consisted of patients attending a private dermatologic clinic in an urban setting. This introduces the possibility of bias, which makes it difficult to make fair comparisons between our study population and those of the general rural Tanzanian and Indian populations previously described. The infrequency of publications with up-to-date epidemiologic information on Afro-Caribbean dermatologic disease leaves little alternative however, and using the data available the spectrum of skin disease noted in our study of Afro-Caribbeans was more comparable to North American and European black populations than to the African and Indian study populations.

There remains the need for further study among Afro-Caribbean patients from a broader socioeconomic spectrum.

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