

EPIDEMIOLOGY OF CUTANEOUS DISEASES ACCORDING TO GEOGRAPHICAL LOCALE: NORTH, CENTRAL AND SOUTH AFRICA

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Africa has been called a land of disease and frustration, and I have certainly known the latter in trying to condense a year's work into a palatable 15 minute dose.

The first classification of dermatoses is into the ubiquitous (such as scabies), the tropical (such as the filariases), and those largely restricted to the tropics because of the habits and hygiene of the inhabitants of that zone (such as leprosy); but because of Africa's situation astride the equator and because of migration, tropical diseases may be encountered even in the temperate zones.

The main factors on influencing the incidence of dermatoses are listed on the projection; these factors overlap and interrelate.

Race

The distribution of the races in Africa is shown on the map. Allowing for variation in pigmentation the Hamites' and Semites' reaction to disease is similar to that of the Europeans, to whom they are related; and so, too, is that of the Coloured (Afro-European) people in South Africa.

White people in Africa suffer from most of the dermatoses encountered in Europe and show a high incidence of photosensitivity diseases. Inbreeding long ago, when the white population of South Africa was small, has resulted in some familial diseases, notably porphyria, being common today. In the tropics the whites' main complaints are pyodermas, mycoses and prickly heat.

We must now recall some basic dermatological differences between the Negro and the European. When I speak of Negroes I imply all the various negroid peoples of West, Central and Southern Africa. The fibroplastic diathesis is a feature of Negro skin; keloids and fibrosis round chronic ulcers are common, and the trait may explain the Negro's tendency to produce lichenification, lichenoid eruptions, juxtaarticular nodes, elephantiasic swellings and lymphostatic verrucosis. The dark skin conceals some eruptions, but others, such as pityriasis alba and tinea versicolor, stand out more clearly. Circinate and florid secondary syphilides are commoner than in the European. The black skin is less liable to injury by the sun and by chemical irritants and allergens; but note that chronic discoid lupus erythematosus is not uncommon. Some diseases rarer in the Negro than in the European are psoriasis, prickly heat, pruritus ani et vulvae, dermatitis artefacta, xanthomatous eruptions, all the alopecias, moles and birthmarks.

The eczemas in general are less common, but the urban Negro seems to be adopting the eczema spectrum of the European. Acne is seldom severe. Senile and solar keratoses occur only in albino Negroes, and keratoacanthoma, colloid milium, painful nodule of the ear and lipoid proteinosis are not so far reported. Seborrhic warts occur only as dermatosis papulosa nigra. True ainhum and onyalai, a thrombocytopenia, are virtually restricted to Negroes.

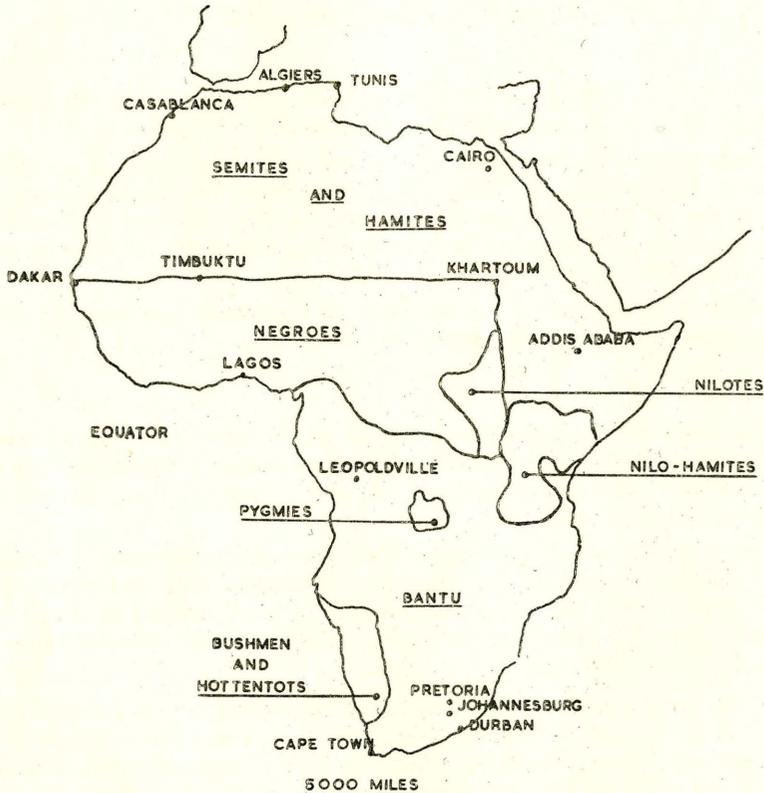
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FACTORS INFLUENCING THE
INCIDENCE OF DERMATOSES

- RACE
- CLIMATE
- NUTRITION
- WAY OF LIVING
- MIGRATION
- MEDICATION

COMMON DERMATOSES
OF AFRICA

- DISEASES OF MALNUTRITION
- PYODERMAS
- MYCOSES
- PARASITOSIS
- TREPONEMATOSES
- LEPROSY



The Negro's reaction to disease cannot be related to skin colour alone. Indians in Africa may be just as pigmented, but their disease pattern is not identical to that of the Negro.

Climate

The climate shades off from tropical in the centre to temperate at either extremity, but disease patterns vary over short distances even in the tropics because of differences in elevation, temperature and humidity. These influences impinge on man and on the insect and microbic populations. For example, papular urticaria from fleas and larva migrans are commoner at the coast than inland in South Africa, and myiasis is rare beyond the subtropics. In the tropical belt where the winter temperature never falls below 16° C., the commonest tumour of children is a lymphoma which may well be viral and insect-borne.

EPIDEMIOLOGY OF CUTANEOUS DISEASES IN AFRICA

Deficiency diseases follow the seasons. Pellagra, for example, is commonest just before the harvest.

Nutrition

Malnutrition, protein deficiency in particular, is one of Africa's greatest problems. Apart from causing deficiency diseases as such, it predisposes to many diseases of the skin and other organs.

Protein deficiency is a big factor in tropical ecthymatous ulcer and malnutrition plays a part in other pyodermas and even, perhaps, in the dermatophytoses. Malnutrition lies behind the liver diseases so common in the Negro, and hepatic insufficiency probably explains the porphyria of the South African Bantu. Hepatic insufficiency leading to oestrinization has been suggested as a reason for the mildness of acne in the Negro.

All the manifestations of malnutrition are seen in profusion in Africa. Kwashiorkor is common in children and all the syndromes of protein and vitamin deficiencies occur in adults. The clinical picture varies according to the staple diet.

Way of Living

The way of living and hygienic state influence many infective diseases. The main diseases of those who live in dirt and misery are scabies, pyoderma, mycoses, donovanosis, rhinoscleroma, leprosy and treponematoses.

Clothing is important. The traditionally clad peoples are less liable to prickly heat than those who dress in European style, but the naked are more liable to contagion. The barefoot rarely get athlete's foot, but they do get jiggers and Madura foot.

Many of the occupational diseases found elsewhere are seen, and there are naturally some conditions peculiar to certain areas such as imbuia wood dermatitis in South Africa and mvuli wood and pyrethrum dermatitis in Kenya.

Migration

Many inhabitants of Africa have always been pastoral migrants, but today migration is towards the cities. Although this is so, most migrant workers in South Africa still leave their families on the farm and return home between spells of duty. The gold mines alone attract 400,000 Bantu workers annually; they come from as far afield as Central Africa and arrive malnourished and suffering from a variety of diseases some of which, such as yaws, jiggers and onchocerciasis are foreign to South Africa. The miners are very well fed, have the best of medical attention and return home in excellent condition. Migrant workers in other industries are not always so well tended and may take home venereal syphilis.

I must recall an earlier migration, that of the Negro slaves to the Americas. They took with them the various filarioses and alastrim as well as their inherent tendencies to fibroplesia, ainhum and so on. Loaiasis never established itself in America; but guinea worm, onchocerciasis and elephantiasis persist in parts of tropical America. It is still uncertain whether *Tunga penetrans* originated in Africa or America. The slaves also got a fulminating gangrene of the anus and rectum called *mal del culo*, which I cannot identify.

It is probable that Africa was the fount of the treponematoses and leprosy which still abound in the tropics.

Medication

Witch doctors still flourish and in South Africa have their own medical association. Their medicines are nothing like as dangerous as the white man's but occasionally cause dermatoses and have been suspected of causing onyalai.

Primitive Negroes are desolate if their bowels are not always on the move. Phenolphthalein is their favourite purgative and fixed eruption is commonplace; this drug is also responsible for some cases of Stevens-Johnson syndrome and toxic epidermal necrolysis. Sulphonamides are the next commonest cause of drug eruptions in Negroes.

Lack of medication is more important than medication. Africa is vastly underdoctored and it will be decades, if not generations, before even easily-curable diseases like the treponematoses are eradicated.

The Diseases of Africa

Malnutrition and lack of hygiene are the main factors influencing disease in Africa. What Africa needs, in fact, is more steak and more soap. The common dermatoses are listed beside the map, but the order of incidence varies from one area to another.

Taking Africa by regions, here are some highlights: cutaneous leishmaniasis and rhinoscleroma are features of North Africa; Central Africa abounds in parasitoses, leprosy and treponematosis; and Southern Africa produces more cases of porphyria in Whites and Negroes than anywhere else in the world.

In a quick survey of the dermatoses I shall pick out points of local interest not already mentioned.

Of the allergic dermatoses it need only be said that parasitic infestations are oftener involved than they are in Europe or the U.S.A.

Ecthyma and tropical ulcer are common in the underfed, and noma, cancrum oris and fulminating gangrene of the genitals are also diseases of the malnourished. Cutaneous tuberculosis is often seen, lupus vulgaris and scrofuloderma predominating.

Yaws is common in the tropics and foci of endemic syphilis are found all over Africa. Venereal syphilis is widespread, but declining in advanced countries. Extragenital chancre is rare in the Bantu, presumably because they have not read 'The Perfumed Garden'.

All the viral diseases except orf have been seen, and new ones, such as o'nyong nyong, are constantly being recognized.

All the main fungous diseases with the exception of North and South American blastomycosis and coccidioidomycosis have been reported.

Africa has a great selection of biting insects, some of which are disease vectors. The main parasitoses are scabies, papular urticaria, the filarioses, larva migrans, myiasis, leishmaniasis and schistosomiasis.

Porphyria, familial in Whites, acquired in the Bantu, is the most interesting of our metabolic diseases. Lipoid proteinosis is comparatively common in South Africans of German descent.

All the diseases of the connective tissues and fat occur in all races. Dermatomyositis is fairly common in Negroes, but I have never seen it with cancer.

With the exception of Kaposi's acrosarcomatosis the reticulo-endothelioses are commoner in Whites than in Negroes.

White people get their cancers on sun-exposed skin; Negroes get their squamous carcinomas and melanomas mainly on the easily traumatized legs and feet.

This report condenses my findings in a pilot survey, but I should like to remind you that I am now engaged on a full-scale investigation of dermatoses in Africa and that I should appreciate help from any of you who can contribute.