

SKIN MANIFESTATIONS IN AIDS PATIENTS*

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The vast majority of the 5,000 patients with HIV disease seen at Chelsea and Westminster Hospital in central London were homosexual men with only a few heterosexual Africans and intravenous drug users. Most develop skin problems, often successive and different, the recognition and treatment of which contribute to their well-being. The diagnostic skin lesions are Kaposi's sarcoma and hairy leukoplakia.

Kaposi's sarcoma

The tumour can masquerade as a banal skin lesion such as persistent insect-bite reaction, histiocytoma or pyogenic granuloma. Skin biopsy confirms the diagnosis and shows red blood cells in clefts between sheets of sarcomatous cells.

Individual lesions begin as subtle pink macules, often elongating into oval nodules along tissue planes (Lange's lines). They darken with time as haemosiderin is deposited by disintegrating red blood cells. The lesions are also seen in other circumstances. For example, in some HIV negative homosexuals and in other conditions with immunodeficiency, such as renal transplantation, cancer and advancing age. Lesions seem to appear on cool extremities. Oedema may precede visible lesions and can be pronounced and painful. In the mouth there may be red sub-mucosal plaques on the palate or gums, which indicates internal involvement—usually gastro-intestinal, but occasionally of lungs and other organs. These are not metastases, but a manifestation of a multi-origin tumour.

Progression may be slow; if no opportunist infection is present at diagnosis (e.g. oral candidiasis) then the 50% survival exceeds three years. Disseminated Kaposi's sarcoma is a far less common cause of death in these patients, than infection. Radiotherapy is the treatment of choice for painful or swollen lesions and individual unsightly tumours can be excised or photocoagulated. Camouflage can be good for morale.

Hairy leukoplakia

Ribbed, white linear lesions running along the sides of the root of the tongue are diagnostic. They may however be caused by the Epstein-Barr virus infection and seem to respond temporarily to high-dose Acyclovir.

Sero-conversion. A transient rash may accompany the initial HIV sero-conversion illness and may pass unnoticed with macular, red, oval lesions similar to pityriasis rosea, but extending on to the face, palms and soles, and preceded by a flu-like illness with lymphadenopathy and lymphopenia. The illness is often mis-diagnosed as infectious mononucleosis or secondary syphilis. Sero-conversion occurs within weeks.

The skin's immune surveillance system comprises the antigen-presenting Langerhan's cells, T-lymphocytes, keratinocytes and draining peripheral lymph

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FIGURE 1

In Kaposi's sarcoma the tumour extends between collagen bundles, hence it often presents as elongated nodules along Lange's lines, as seen here.

nodes. HIV depletes the lymphocytes, but Langerhan's cells also carry the CD4 antigen and are thus a target for HIV infection. Although their numbers do not seem to diminish following HIV infection, their function probably does. As immunity diminishes, infectious disease involving the skin become more common and severe.

Other viral infections. Shingles (herpes zoster) affects over 25% of HIV positive patients—sometimes involving numerous dermatomes, accompanied by multiple distant chicken pox lesions and followed by post-herpetic neuralgia. Second and even third attacks of shingles are seen. Recently, persistent disseminated hyperkeratotic papules due to the chicken pox virus have been described. From these, Acyclovir-resistant virus has been isolated, hence the initial infection should be treated with Acyclovir 30-40 mg per kilogram per day until the crusts have shed (ten to twelve days). Primary varicella is much less frequent—most cases have sparse atypical lesions suggesting re-activation of endogenous virus.

Herpes simplex may lead to painful, large non-healing ulcers, sometimes at an unfamiliar site, and to peri-anal lesions. Biopsy tissue culture and a trial of Acyclovir should be considered in any chronic non-healing skin ulcers.

Molluscum contagiosum may seed in hundreds over large areas, and the skin of the whole sole can be shod in verrucas.

Cytomegalovirus (CMV) infection causes severe systemic disease in AIDS patients, with enteritis, retinitis, encephalitis, and pneumonitis. Rarely, it may be the cause of peri-anal ulcers.

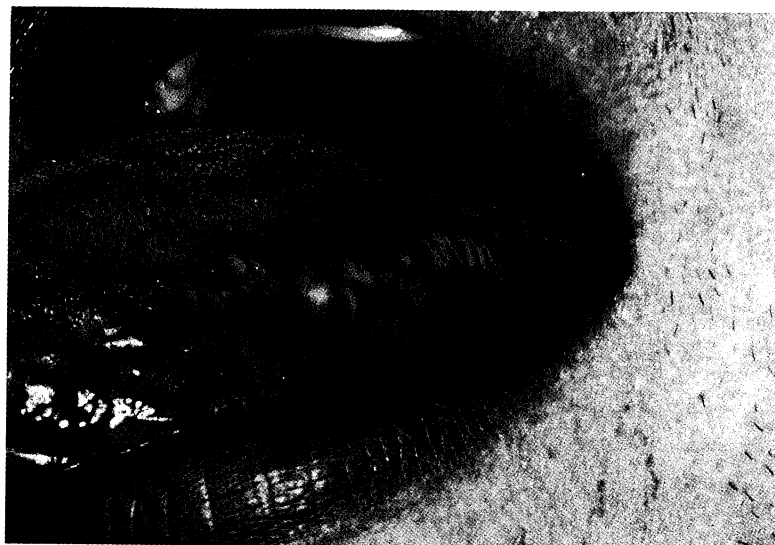


FIGURE 2

White corrugated plaques at the root of the tongue in Hairy Leukoplakia.



FIGURE 3

Periauricular ulcers in a HIV positive young woman due to Herpes simplex virus. The ulcers responded promptly to Acyclovir.



FIGURE 4

Scabies in HIV. Note myriads of tiny burrows.

Infections

Fungal. Oral candidiasis (thrush) accompanies the diminishing immunity seen in HIV infection. Taste is altered and is often accompanied by perleche and by oesophagitis causing dysphagia. Dermatophyte infection is extremely common—with onychomycosis, tinea pedis, cruris and versicolor seen in otherwise asymptomatic HIV infected individuals, *T. rubrum* is the commonest isolate. Lesions are resistant to treatment and recur frequently. Deep fungal infection occurs in AIDS and may invade the skin forming papules, plaques and ulcers. All curious ulcers and papules in HIV patients should be biopsied and the outcome can be a diagnosis of cryptococcosis, histoplasmosis, sporotrichosis or infection by *penicillium marneffe*.

Bacterial infection is particularly common in children with HIV disease, but recurrent staphylococcal or streptococcal impetigo or cellulitis in a patient at risk should signal the possibility of HIV disease. Ecthyma gangrenosum may occur with severe immunodeficiency. Syphilis can produce very florid secondary eruptions with delayed serology, and relapse despite conventional treatment. Gumata may form at an early stage.

Bacillary angiomatosis is a rare eruption of nodules with an epithelioid angiomatous histology responding to erythromycin. The clumps of bacteria that can be seen histologically have now been identified as that which also causes Cat Scratch Disease, *Rochalimae Henselae*.

Infestations

HIV patients can tolerate heavy burdens of the sarcoptes mite without producing the usual intense pruritis giving rise to disseminated crusted or Norwegian scabies. Infested patients are highly infectious owing to the heavy numbers of mites.

Non-infectious cutaneous manifestations of HIV disease

At least a third of our patients develop seborrhoeic dermatitis. This occurs in the usual distribution, but often with a prominent perifollicular component and extending on to the flanks and thighs. Scrapings may be positive for *Pityrosporum orbiculare*. Topical imidazoles are helpful in the management of early cases, but later more potent steroids are needed. Patients may also have itchy follicular lesions on the face and trunk—sometimes called eosinophilic folliculitis or pruritic papular eruption of AIDS. An unusual response to intrafollicular organisms is probable but treatment aimed at these is unfruitful. Potent topical corticosteroids or UVB treatment is often required because of intense pruritis.

The behaviour of psoriasis in HIV patients challenges our efforts to understand this enigmatic condition. Prevalence is probably not increased, but the condition is more severe. Reiter's-like psoriasis with rupioid lesions and keratoderma blenorrhagica are common. Lesions can progress alarmingly and are often accompanied by severe arthritis. Cytotoxic treatment is hazardous but Acetretin and Zidovudine can be very helpful.

An acquired ichthyosis is common as the disease advances which may signify malabsorption of essential nutrients.

Drug rashes are much more common, for example with Co-trimoxazole, Dapsone and Fucidic Acid. Zidovudine can cause longitudinal sub-ungual black, streaks, particularly in coloured patients.

Auto-immune disease

Thrombocytopenia with or without purpura is common. Alopecia areata and totalis, morphea, lichen planus and granuloma annulare have been reported.

Cutaneous malignancy and HIV disease

Cutaneous lymphoma has been described and is likely to be related to decreased immunity. Malignant melanoma and squamous carcinoma can progress alarmingly. Oral and ano-rectal squamous carcinomas may ensue.

Summary

The dermatologist is in a unique position to play a life-saving role in the early diagnosis and care of HIV patients and can significantly contribute to improving the quality of their lives. Early biopsy with culture for organisms is the key and should precede a course of treatment, rather than be resorted to if it fails. Surprises and atypical presentations are the rule. The exaggerated severity of the common non-infectious skin conditions remain a challenge in this vulnerable group of patients.

REFERENCES

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- ² Cowley NC, Staughton RCD. Human immuno-deficiency-related skin disease. *Curr Opin Infect Dis* 1991, 4: 659-66.

LESSONS FROM A SYMPOSIUM ON DERMATOLOGY HELD IN THE COLLEGE ON 4 MAY 1994*

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In the UK 10 per cent of those who go to their family doctors do so with skin problems. Despite recent advances and improvements the specialty of dermatology continues to challenge students and doctors at all levels of practice and training. The symposium provides a comprehensive overview of dermatology today, from guidance on when to consult a dermatologist, through to an update of the contribution of molecular science to the discipline.

Skin clues to systemic disease

Many systemic diseases first declare themselves in the skin and physicians need to be alert to these clues. All of the largest organs in the body should be inspected in the pursuit of 'Sherlockian dermatology'. Pruritus as a symptom may have its primary cause in the skin (eczema, dermatitis, scabies, urticaria, dermatitis herpetiformis, lichen planus, psoriasis). However, generalised itch and shiny nails suggest it is genuinely systemic and may be due to internal diseases including chronic renal failure, obstructive liver disease, lymphoma, polycythaemia rubra vera (in which the itch is often worse after bathing), drug sensitivity, thyroid disease, diabetes mellitus and psychiatric diseases.

Hair and nail clues

In man, hair and nails are relatively vestigial differentiated epidermal structures, yet can provide a plethora of clues to the keen observer.

- (a) The yellow nail syndrome, characterised by slow growth, over-curvature, yellow colour, onycholysis and shedding, may have associations with bronchiectasis, serous cavity effusions, lymphoedema, sinusitis, rheumatoid arthritis, thyroid disease and neoplasia.
- (b) Beau's lines, which are transverse single depressed lines across the nail, may occur with any acute illness including psychiatric disorders. The equivalent may also be seen in the hair as a narrowing of the hair shaft.
- (c) Silent haematomas from bleeding diatheses may manifest as splinter haemorrhages. Trauma is the most likely aetiological factor if they occur at the separation of the nail plate and fold, but if occurring more proximally, arterial emboli, vasculitis, septicaemia and scurvy should be considered.
- (d) Onycholysis may be associated with trauma, dermatological (psoriasis, onychomycosis) or systemic disease, particularly thyroid dysregulation.
- (e) Hairloss can prove devastating to the patient. In telogen effluvium the hair is lost in the resting phase and represents exaggeration of normal shedding. This forms the basis of most causes of diffuse alopecia. It may be associated with iron

*A list of speakers and the titles of their papers presented at this symposium is recorded in *Proceedings* Vol 24, p 475.