

Common skin and mucosal disorders in HIV/AIDS

Jordaan HF, MBChB, MMed(Derm)

Department of Dermatology, Faculty of Health Sciences, Stellenbosch University and Tygerberg Hospital

Correspondence to: Prof Francois Jordaan, e-mail: hfj@sun.ac.za

Abstract

The human immunodeficiency virus (HIV) epidemic continues to spread and evolve on a worldwide basis. Currently more than five million patients in South Africa are living with HIV/AIDS. Cutaneous and mucosal complications eventually occur in nearly all individuals with HIV infection, and can be debilitating, disfiguring, and life-threatening. Their incidence increases with deteriorating immune function. Familiarity with cutaneous disease patterns in this population enables early diagnosis and institution of correct treatment, detection of unrecognised HIV infection or progression to the acquired immunodeficiency syndrome (AIDS), and, counselling and prevention of further transmission. Knowledge of the skin and mucosal signs of HIV/AIDS is important.

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Introduction

Patients may present with skin and mucosal signs or they may develop during the course of the illness. Skin signs give an indication of the degree of immunodeficiency and prognosis of the patient and also form an integral component of the WHO staging system. Skin signs are a common component of drug reactions and the immune reconstitution and inflammation (IRIS) syndrome. The diagnosis of skin and mucosal conditions is often difficult. Patients may present with atypical signs, double and triple pathology are common, a single aetiological agent may cause diverse clinical features, diverse aetiological agents may cause a single morphological presentation, patients are often receiving multiple medications, drug interactions may occur, new conditions are regularly published, and cases are seen with new unpublished manifestations. Atypical presentation refers to unusual distribution and morphology of lesions, resistance to treatment and recurrence following adequate treatment.

The number of T-helper lymphocytes (CD4 count) is a useful measure of a patient's immunocompetence or, by inference, disease progression. A healthy person has a CD4 count of 1200–1400. The declining CD4 count often is associated with the appearance of certain cutaneous conditions (Table I). Zidovudine prophylaxis may be initiated when the CD4 count drops below 500 and *Pneumocystis jiroveci* pneumonia prophylaxis when the CD4 count reaches 200 or below. However, it is not uncommon to treat a patient with a CD4 cell count of less than 20 who has experienced none of these disorders. Nonetheless, in patients with HIV infection, a CD4 cell count below 200 correlates with a number of skin conditions, including severe systemic and cutaneous infections caused by viruses, bacteria, parasites or fungi.

Primary HIV infection

Two to four weeks after inoculation with HIV-1, with high levels of circulating infectious virions, a symptomatic seroconversion reaction occurs in 50 to 70% of individuals. Arthralgia, myalgia, fever, weight

Table I: Correlation between disease occurrence and CD4 counts

Condition	CD4 Count
Seborrhoeic dermatitis	500
Onychomycosis	450
Oral hairy leukoplakia	400
Herpes zoster	400
Oral candidiasis	300
Molluscum contagiosum	250
Tuberculosis	< 200
Cutaneous anergy	< 200
Eosinophilic folliculitis	100
Mycobacterium avium intracellulare	50
Resistant herpes simplex	50

Modified from Reference 1

loss, nausea, vomiting and diarrhoea and lymphadenopathy are present. Neurological manifestations include aseptic meningitis, encephalitis and neuropathy. A cutaneous eruption is present in approximately 75% of cases and is characterised by a widespread, non pruritic morbilliform rash which typically fades within one to two weeks. Urticarial and vesicular lesions have been described. Alopecia may develop. Erythema multiforme and acute erosive genitocrural intertrigo have been described. Histology in all instances is nonspecific and does not give a clue of the underlying HIV infection. Mucocutaneous ulceration involving the oropharynx, oesophagus, or anogenital area is common. Severe primary HIV infection may be associated with oropharyngeal or oesophageal candidiasis. Illness lasting more than two weeks is associated with an eight times higher risk of developing AIDS within three years after seroconversion.

Diagnosis of HIV seroconversion is made by detection of p24 antigen, appearing within days of infection; detection of HIV-specific antibodies, appearing within the first few weeks of onset of the acute illness; or isolation of HIV by culture or by HIV DNA or RNA PCR.

Cutaneous manifestations of HIV-disease are numerous (Table II). Only twelve conditions will be discussed in more detail. The treatment of these conditions, the influence of antiretroviral treatment, and IRIS will not be addressed comprehensively.

Table II: Cutaneous manifestations of HIV infection

Cancers	Viral infections
Kaposi's sarcoma	Molluscum contagiosum
Lymphomas (B-cell)	Herpes simplex (chronic/disseminated)
Basal cell carcinoma	Zoster
Melanoma, dysplastic nevi	Varicella
Arthropod infections	EBV-related rash
Scabies (crusted)	Oral hairy leukoplakia
Protozoal infections	Warts
Amoebiasis	Cytomegalovirus infection
Fungal infections	Disorders of hair and nails
Candidiasis	Leukonychia, nail deformity, yellow-nail syndrome
Dermatophytosis	Alopecia areata
Tinea versicolor	Eyelash hypertrichosis
Alternariosis	Telogen effluvium
Cryptococcosis	Acne conglobata
Histoplasmosis	Miscellaneous
Pneumocystosis	Dry skin, ichthyosis
Sporotrichosis	Manifestations of nutritional deficiency
Scopulariopsis	Eosinophilic folliculitis
Bacterial infections	Papular and lichenoid pruritic eruptions
Abscesses	Atopic dermatitis
Folliculitis	Pseudolymphoma
Impetigo	Granuloma annulare
Ecthyma	Pyoderma gangrenosum
Cellulitis	Precocious skin aging
Mycobacteriosis	Bullous pemphigoid
Actinomycosis	Erythema elevatum diutinum
Syphilis	Grover's disease
Staphylococcal scalded-skin syndrome	Drug eruptions
Papulosquamous diseases	Lichen planus
Seborrhoeic dermatitis	Papular mucinosis
Psoriasis, Reiter's syndrome	Neutrophilic eccrine hidradenitis
Pityriasis rosea	Eruptive dermatofibroma
Worsening of	Urticaria, pruritus and prurigo
Infections (e.g. syphilis, scabies)	Photosensitivity
Dermatoses (e.g. psoriasis)	Porphyria cutanea tarda
Vascular lesions	
Vasculitis	
Livedo	
Angiolipomas	
Bacillary angiomatosis	
Thrombocytopenic purpura	
Telangiectasias	
Hyperalgalic pseudophlebitis syndrome	
Cutis marmorata	

Modified from Reference 2

1. Staphylococcus aureus infections

Staphylococcus aureus is the most common cutaneous and systemic bacterial pathogen in HIV-infected adults. Increased nasal carriage, an impaired cutaneous barrier, decreased numbers of, and ineffective neutrophils, as well as pruritus and scratching contribute to the

development of pyoderma. Cutaneous infection correlates with advancing immunodeficiency and can manifest as impetigo, ecthyma, folliculitis (Figure 1), furunculosis, abscesses, staphylococcal scalded skin syndrome or cellulitis. Impetigo appears as chronic, crusted erosions of the head or neck, or atypical bullous lesions of the axillae or groins. Folliculitis is often pruritic and accompanied by eczematization. The denouement of folliculitis is very difficult. In the differential diagnosis herpes simplex folliculitis, varicella/zoster folliculitis, dermatophyte folliculitis, candida folliculitis, malassezial folliculitis, demodex folliculitis and eosinophilic folliculitis must be considered. *S aureus* may also cause secondary infection of underlying atopic dermatitis, scabies, herpetic ulcers, or Kaposi's sarcoma. Infection of indwelling venous catheters is common, and is associated with significant morbidity. Unusual clinical patterns of infection may occur such as botryomycosis, a chronic suppurative infection with grains in the purulent material, and atypical plaque like lesions of the scalp, axilla and groin. These lesions are refractory to treatment. Methicillin-resistant *Staphylococcus aureus* may present particular problems. Cutaneous bacterial infection in HIV-infected patients poses the risk of bacteraemia and septicaemia. The clinician must be alert to the dermatological signs of systemic bacterial infection such as splinter haemorrhages and acral papulonecrotic lesions.

Figure 1: Widespread staphylococcal folliculitis



A high index of suspicion and a low threshold for performing microbiological investigations (Gram stains and cultures) and skin biopsies is important to enable precise diagnosis and institution of prompt treatment.

Patients should be treated with oral dicloxacillin and topical mupirocin, or intravenous nafcillin if cellulitis is present. Eradication of the carrier state can be achieved by applying mupirocin ointment to the nares, chlorhexidine gluconate solution for washing, and oral rifampin.

2. Dermatophytoses

Dermatophytes infect keratinised skin, hair, and nails. Superficial fungal infection in HIV-disease can have an atypical clinical presentation and may be extensive, recurrent, and difficult to treat. Facial involvement can mimic seborrhoeic dermatitis. Lesions may appear psoriasiform. Palmoplantar lesions are commonly hyperkeratotic. Lesions commonly are encountered without an active border, scaling and central clearing such as are found characteristically in the immunocompetent host (Figure 2). Widespread dermatophytosis is not common in HIV/AIDS. Nodular perifolliculitis (Majocchi's granuloma) (Figure 3) has been observed. Dermatophyte infection of the nails, typically caused by

Trichophyton rubrum, in the non-HIV-infected individual occurs as distal and lateral subungual onychomycosis. In HIV-infected patients proximal white subungual onychomycosis (Figure 4) is characteristic, appearing as chalky, white proximal nail discolouration. This condition is rare in non-HIV-infected individuals. The finding of proximal white subungual onychomycosis is an indication for HIV serotesting.

Figure 2: Dermatophyte infection on the cheek. An active border is only focally present



Figure 3: Nodular perifolliculitis displaying verrucous morphology. Note the lymphadenopathy (arrows)



Figure 4: Proximal white subungual onychomycosis involving the first toe nails



Diagnosis of dermatophytosis is established by the demonstration of mycelia in a potassium hydroxide (KOH) preparation of lesional scrapings and isolation of the fungus on culture.

Systemic treatment is indicated for widespread cutaneous involvement, tinea capitis and for involvement of several nails. Griseofulvin, ketoconazole, itraconazole and terbinafine are effective treatments. For localised involvement a topical imidazole preparation will usually suffice.

3. Candidiasis

Oral candidiasis has classically been associated with immunosuppressive states and was one of the first features to be identified in the early days of the HIV epidemic. The prevalence of oral candidiasis in HIV patients ranges from 30–80% according to the population, the follow-up period and the level of immunodeficiency. The greater the level of immunodeficiency the more frequent the infection. Candidiasis is related to an unfavourable outlook for the patient. Mucosal candidiasis is a frequent HIV-associated opportunistic infection and its presence in an apparently healthy adult necessitates HIV serotesting. It is a consequence of overgrowth of a normal resident microorganism. Oropharyngeal candidiasis (Figure 5), the most common form, is often the initial manifestation of HIV-disease, and is a predictor of progression to AIDS. This condition is often asymptomatic, but soreness or burning of the mouth, or dysgeusia may be experienced. Five patterns of presentation are seen (Table III). Esophageal candidiasis may be asymptomatic or associated with retrosternal burning or odynophagia, and is an AIDS-defining condition typically affecting those with a CD4 count of less than 100. Candidiasis may also involve the lungs and bronchi. In HIV-infected women, recurrent candidal vulvovaginitis occurs frequently and may be the initial clinical manifestation of HIV-disease. In young children with HIV-disease, chronic candidal paronychia and nail dystrophy are frequent. Candida may cause intertrigo. Recurrences of the infection following seemingly effective treatment are common. Diagnosis of candidiasis is made by the clinical presentation and demonstration of pseudomycelia on a KOH preparation of lesional scrapings. Culture is not helpful.

Figure 5: Erythematolous candidiasis involving the dorsal aspect of the tongue



Treatment options include topical nystatin or clotrimazole, and systemic ketoconazole, itraconazole, or fluconazole. Intravenous amphotericin B should be administered in refractory cases.

4. Herpes simplex virus

Herpes simplex virus (HSV) and varicella zoster virus (VZV) cause latent or recurrent infections of the skin and nerves. With HIV-associated immune suppression, previously latent or mild infections may become severe. Both HSV and VZV infections are markers for unsuspected HIV infection and HIV serotesting should be considered. Genital herpes is a risk factor for transmission of HIV infection mainly through transfer of virus during sexual intercourse. Herpes simplex

Table III: Patterns of presentation of oropharyngeal candidiasis

1. Erythematous or atrophic – patches of erythema on the palate or atrophic areas on the tongue
2. Pseudomembranous – superficial, white flecks without surrounding inflammation
3. Hyperplastic – patchy hyperkeratosis on the dorsum of the tongue
4. Erosive / ulcerative – shallow defects of the mucosa covered with a seropurulent exudate
5. Angular cheilitis – intertrigo at the angles of the lips

infection of longer than one month duration in HIV patients is an AIDS-defining condition. Reactivated HSV infection is a common complication of HIV-disease. Frequent sites of infection include the anogenital area, face, oropharynx, and fingers. Periungual lesions (herpetic whitlow) and herpetic folliculitis on the face are frequently misdiagnosed as bacterial infections. In early HIV-disease, HSV infection has a classic presentation with grouped vesicles or erosions that heal in one to two weeks without treatment. With increasing immunodeficiency, painful enlarging ulcers with raised margins occur. Untreated these ulcers may enlarge and become confluent involving large areas of the face or anogenital region (Figure 6). When the CD4 count are less than 50, 58% of all ulcerations and 67% of all perianal ulcerations contain HSV. Multiple scattered lesions in one area are not uncommon, but widespread dissemination of HSV is rare, even in patients with advanced HIV-disease. Spreading ulcers contiguous with herpetic vesicles of the lips may occur (Figure 7). These ulcers are noninflammatory and a very high index of suspicion is necessary to make the correct diagnosis. Moist plaques with seropurulent exudates (Figure 8), may appear in the anogenital area and lower back. HSV infection is often non self-limiting. Persistent necrotic digits have been described. HSV can also infect the mucosa, producing proctitis, glossitis, oesophagitis, or severe gingivostomatitis, seen mainly in children. HSV should be considered in the differential diagnosis of any ulcerative or crusted lesion in a patient with HIV-disease. The presence of mucocutaneous HSV infection for longer than one month is suggestive of advanced HIV infection.

Figure 6: Multiple ulcers involving the anogenital region. Note the depth of some ulcers.

The Tzanck smear and lesional skin biopsy are diagnostically useful but cannot distinguish between HSV and VZV infection. Specific diagnostic techniques include detection of specific HSV-1 and HSV-2 antigens in exudates of tissue by direct fluorescent-antibody staining and the amplification of HSV DNA by PCR. Serologic tests are of no value in the diagnosis of cutaneous HSV infections. Isolation of HSV

Figure 7: Superficial herpetic ulcers of the upper lip and angle of the mouth**Figure 8:** HSV infection of the scrotum showing a moist, purulent plaque. Postinflammatory hypopigmentation is present at the site of a previous lesion

by culture enables viral typing and determination of antiviral drug susceptibilities.

Treatment options include acyclovir, famciclovir and valaciclovir. Lack of response suggests infection with a resistant strain. Treatment with foscarnet should be considered in these cases.

5. Varicella-zoster virus

Primary VZV infection (varicella) in HIV-disease can be severe (Figure 9), prolonged, and complicated by parenchymal infection such as pneumonia, bacterial superinfection, and death. HIV-infected individuals with previous varicella have a risk of reactivated VZV infection (herpes zoster), 17 times greater than that of non-HIV-infected controls. Herpes zoster in any patient should raise the issue of HIV serotesting. Herpes zoster may be the initial manifestation of immunodeficiency, but can develop at any stage of HIV-disease and is not predictive of more rapid progression to AIDS. Herpes zoster appears more frequently in patients with low CD-4 counts. Herpes zoster typically presents as a painful, vesicular, erosive, dermatomal eruption which resolves uneventfully. With increasing immunodeficiency, it can also be multidermatomal (usually contiguous), ulcerated, disseminated, or recurrent, followed by postherpetic neuralgia and scarring. Lesions that persist for months after primary, reactivation, or disseminated VZV infection may appear as painful hyperkeratotic, ulcerated, or crusted nodules (Figure 10). Folliculitis, verrucous dermatomal plaques and widespread ecthymatous necrotic lesions have been documented. With marked immunocompromise

visceral dissemination, and CNS involvement such as encephalitis, meningitis, myelitis, and polyneuritis may develop.

Figure 9: Extensive varicella infection. The patient also had varicella pneumonitis

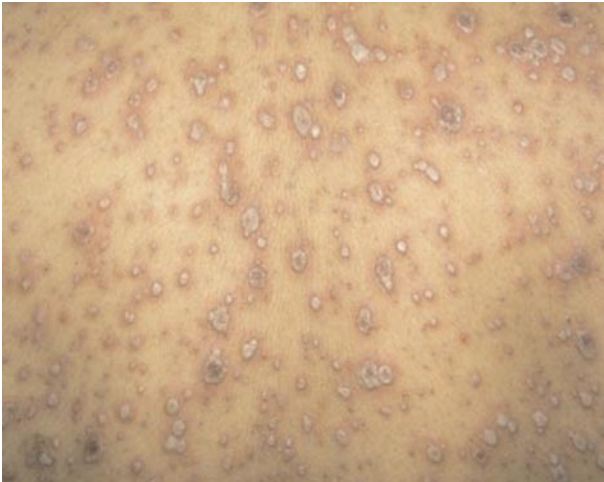


Figure 10: Hyperkeratotic persistent lesions in varicella. Lesions still contained virus

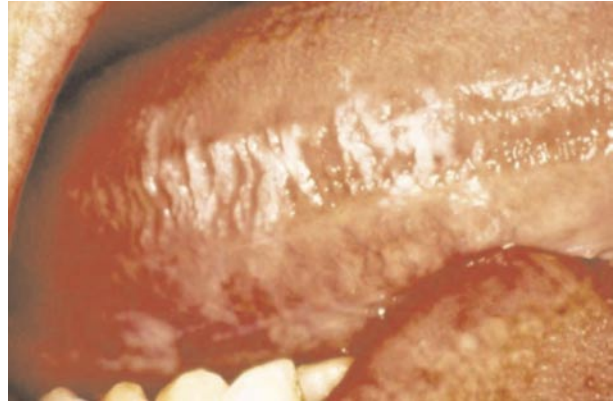


The diagnosis of herpes zoster is made on clinical findings, assisted by a Tzanck smear, lesional biopsy, monoclonal antibody detection of VZV antigen in a smear of an exudate, and isolation of VZV- by viral culture. Patients with mild to moderate immunodeficiency can be treated with oral acyclovir (800 mg every 6 hours for 7 days). Those with advanced immunodeficiency, recurrent disease, or ophthalmic involvement should be treated with intravenous acyclovir. Famciclovir and valaciclovir are alternative therapeutic agents. If lesions do not respond within one to two weeks, foscarnet therapy should be considered.

6. Epstein-Barr virus

Oral hairy leukoplakia (OHL) is a benign lesion of the oral mucosa caused by replication of the Epstein-Barr virus. OHL has been detected in the majority of HIV-infected homosexual and bisexual males with moderate to advanced immunodeficiency. OHL has also been described in normal and in HIV-seronegative immunosuppressed patients. Nevertheless, OHL is particularly important because it is an early specific sign of HIV infection, with the sinister implication that 75% of patients develop AIDS within 2–3 years. Lesions are asymptomatic, single or multiple, white or grey, corrugated plaques with characteristic vertical ridging (Figure 11). Lesions are typically found on the lateral and inferior surfaces of the tongue, but may extend to involve other parts of the tongue, the buccal mucosa and soft palate. In contrast with pseudomembranous candidiasis, OHL cannot be removed with a dry gauze or curette and usually does not respond to antifungal therapy. OHL is a clinical indicator of disease activity. Trauma, lichen planus and white-sponge nevus should also be considered in the differential diagnosis.

Figure 11: Oral hairy leukoplakia involving the side of the tongue



Diagnosis is made on clinical grounds, but can be confirmed with biopsy.

Topical podophyllin is reasonably effective in the treatment of OHL. Chronic systemic acyclovir is also beneficial, but lesions recur after discontinuation of treatment. Recently oral famciclovir has been reported to be beneficial in the treatment of OHL.

7. Molluscum contagiosum

Lesions of molluscum contagiosum (MC) are caused by a large (200 x 300 nm) double stranded DNA virus of the family *Poxviridae* which selectively infects human epidermal cells. The virus is transmitted via contact with infected skin. In the immunocompetent host, lesions are discrete, pearly, dome-shaped, often umbilicated papules of 3–10 mm in diameter, which eventually resolve spontaneously. In HIV-infected individuals, MC has a 5–18% prevalence and is a manifestation of moderate-to-advanced immunosuppression. Patients with numerous mollusca involving multiple sites have CD4 counts of less than 50, almost without exception (Figure 12). Patients present with multiple small, papules or nodules or large tumors, over 1 cm in diameter (Figure 13), most commonly arising on the face, especially the beard area, the neck, and intertriginous sites. Shaving is a major factor in the spread of mollusca. Lesions are commonly not dome shaped and the central umbilication is often absent. These lesions cause significant morbidity because of the physical disfigurement and their potential to induce pruritus and eczematization. Multiple facial lesions must be differentiated from the cutaneous lesions of disseminated cryptococcosis, histoplasmosis, coccidioidomycosis, and penicilliosis.

The diagnosis is based on the distinctive clinical morphology aided by the expression of a white, curd like core. This core reveals characteristic viral inclusions (molluscum bodies) upon staining with toluidine blue or Giemsa stain. Lesional biopsy shows a downgrowth of epidermal cells containing molluscum bodies.

Figure 12: Numerous MC involving the fingers and buttocks





Figure 13: Giant MC and large confluent MC in a young child



Therapy is aimed at reducing the number of disfiguring lesions, but cure of the infection is difficult. Cryosurgery, curettage, electrodesiccation, and laser ablation are useful treatment options. Systemic therapy, including alpha interferon, is ineffective.

8. Scabies

In early HIV-disease, scabies has a classic presentation with erythematous, pruritic papules and burrows in the finger webs, wrists, and anogenital region. With progressive immunodeficiency, individuals may develop either a diffuse papular eruption or hyperkeratotic, yellowish plaques on the scalp, face, hands, back, and trunk (Figure 14) – keratotic scabies. Pruritus is minimal or absent. The number of infesting mites can increase into the millions, making this condition highly contagious. Excoriations can become secondarily infected, at times leading to septicaemia

and death. Multiburrow scabies, featuring hundreds of burrows, associated with keratotic scabies of the skin folds occurred in a haemophiliac child who acquired HIV/AIDS through blood transfusion (unpublished personal observation).

Figure 14: Keratotic scabies involving the abdomen, forearm and hand. Lesions are plate-like, exophytic and/or glove-like



Diagnosis is made by identification of mites, eggs, eggshells or faecal pellets in lesional skin scrapings or skin biopsy.

Patients and household contacts should be treated with gamma benzene hexachloride or benzyl-benzoate. Recurrence of keratotic scabies is common due to the large number of infesting organisms. Ivermectin may become the treatment of choice.

9. Kaposi's sarcoma

Epidemic, or HIV-associated Kaposi's sarcoma (KS), occurs in approximately 15% of individuals with AIDS. In the United States, KS is at least 20 000 times more common in HIV-infected individuals than in the general population, and 300 times more common than in other immunocompromised groups. Ninety-five percent of epidemic KS occurs in homosexual and bisexual men, an incidence much higher than in other risk groups. Human herpes virus-8 may be implicated in the pathogenesis of KS.

The initial lesions of KS are asymptomatic, erythematous to violaceous, macules or papules. Lesions are commonly elongated and follow the lines of skin tension. Enlarging lesions evolve into oval, violaceous nodules or plaques, typically involving the trunk (where their long axes may lie parallel to the skin lines), extremities, face, and oral cavity. Lesions may remain discrete or merge into large confluent masses. Cutaneous KS can cause significant cosmetic disfigurement, especially when present on the face. A second pattern of cutaneous involvement is lymphoedema, which can arise in association with a cluster of KS lesions, or result from proximal lymphatic obstruction. Lymphoedema is usually most pronounced on the distal extremities (Figures 15-16) and the face. Progressive lower limb oedema is often associated with significant pain, and may limit ambulation. Lymphostatic verrucous may develop. The skin assumes a verrucous appearance which is related to reactive thickening of the skin. Ulceration provides a portal of entry for secondary bacterial infection. Facial oedema may be severe, causing striking disfigurement. Koebnerisation may be witnessed. KS may also involve the oral mucosa (Figure 17), palate and genitalia. Lesions of KS can also arise in the gastrointestinal tract, lymph nodes, liver, lungs, spleen, and kidneys – even in the absence of cutaneous involvement.

Diagnosis is made clinically and can be confirmed by skin biopsy. Local treatment options include intralesional vinblastine, radiotherapy, cryotherapy, or surgical excision. Systemic therapies for more extensive disease include chemotherapeutic agents such as vincristine, vinblastine, bleomycin, adriamycin, doxorubicin, alpha interferon and zidovudine.

Figure 15: Kaposi sarcoma involving the foot and leg. Extensive bony destruction may be present



10. HIV-associated eosinophilic folliculitis

Pruritus is one of the most common symptoms reported in patients with HIV disease. Pruritus may develop in the absence of a skin rash or may be associated with a systemic or cutaneous disease. Skin infections, dermatitis, (e.g. seborrhoeic dermatitis), xeroderma (dry skin), drug eruptions, insect bites, pruritic papular eruption, eosinophilic folliculitis, atopy, hepatitis B or C, renal failure and lymphoma may be associated with pruritus. The diagnostic importance of pruritus is certainly underestimated. Eosinophilic folliculitis (EF), is typically seen in HIV-infected individuals with a CD4 count less than 100. It has also been reported in HIV-seronegative individuals with immune dysregulation. EF is a chronic, extremely pruritic dermatosis. EF is characterised clinically by multiple reddish, oedematous, follicular papules arising on the face, neck (Figure 18), upper trunk, and proximal upper extremities. Pustules are occasionally seen. Excoriations and postinflammatory hyperpigmentation occur commonly secondary to chronic scratching. Photosensitivity may be present. EF must be differentiated from staphylococcal folliculitis, *Pityrosporum* folliculitis, herpetic folliculitis, dermatophyte folliculitis, scabies, acne vulgaris, rosacea, papular urticaria and papular dermatitis. The cause of EF is not known. A role for *Demodex folliculorum* is controversial. IRIS EF has been described.

Figure 16: Plaques of kaposi sarcoma involving the back. Patches and plaques are often elongated and follow the skin lines





Figure 17: Extensive involvement of the gingiva by Kaposi's sarcoma

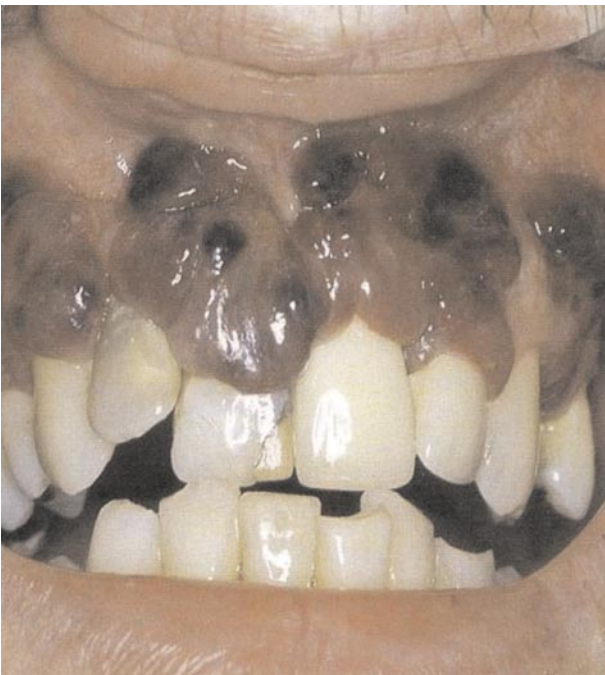


Figure 18: Eosinophilic folliculitis involving the face and neck. Comedones are absent



(PPE) develops in 10–45% of patients with HIV/AIDS. PPE is a sign of advanced immunosuppression occurring at CD4 counts below 100–200. The cause of PPE is unknown, Hypersensitivity to insect bites is a speculative pathmechanism. In the author's experience PPE is indistinguishable from papular urticaria in individuals who are HIV negative. Lesions occur on the trunk and limbs in the form of pruritic papules (Figure 19). The primary lesion is a reddish papule 1–4 mm in diameter. Because of intense pruritus secondary changes such as scratch marks, ulceration, eczematization and secondary pyoderma are common. Histology shows perivascular lymphocytes and eosinophils. Follicular involvement is usually not a feature. PPE and EF are related conditions. Patients are quite commonly encountered who present with both conditions. The treatment of PPE is similar to that of EF.

Figure 19: Pruritic papular eruption involving the back. The primary lesion is a pruritic, reddish papule



11. Papulosquamous disorders

Papulosquamous disorders occurring in the setting of HIV-disease are common. Only 1–3% of the general population have seborrhoeic dermatitis. Seborrhoeic dermatitis occurs in 20–85% of patients with HIV infection. The incidence and severity increase with advancing immunodeficiency. Scaly, erythematous or yellowish patches typically involve the scalp, face, chest, back, axillae, or pubic area. These lesions can be confused with dermatophyte infection, lupus erythematosus or psoriasis. Folliculitis has been reported. Erythroderma may occur. The role of *Malassezia* organisms in the pathogenesis is controversial. In early HIV-disease, seborrhoeic dermatitis responds to treatment with topical corticosteroids and

ketoconazole cream or shampoo. Oral antifungal agents prescribed for fungal infections may inadvertently control seborrhoeic dermatitis. Resistance to treatment characterises advanced HIV-disease. Widespread seborrhoeic dermatitis (Figure 20), resistant to treatment, is an indication for HIV serotesting. Seborrhoeic dermatitis is found at every stage of HIV disease. The frequency, duration and severity of the dermatitis correlates with the degree of immunosuppression. Severe, widespread seborrhoeic dermatitis indicates deterioration of the underlying immunological disorder.

Acquired ichthyosis occurs commonly in patients with advanced HIV-disease. The condition involves the trunk and limbs and is characterised by dry, scaly skin. Emollients provide considerable relief of symptoms.

Xerosis refers to dryness of the skin without scaling. Xerosis is common in HIV disease. Pruritus is often associated. Treatment is with emollients.

The prevalence of psoriasis in HIV-seropositive individuals is similar to that in the general population. Psoriasis may initially present shortly after HIV seroconversion and be the first manifestation of HIV disease. De novo appearance of psoriasis or sudden worsening of pre-existing lesions in a person with high-risk sexual behaviour is an indication for undertaking an HIV test. With advanced HIV-disease, mild preexisting psoriasis may become exacerbated and resistant to therapy. Individuals typically develop discrete, red, scaly plaques or a more diffuse hyperkeratotic dermatitis associated with palmoplantar keratoderma. Guttate psoriasis, inverse psoriasis and erythroderma may develop. Severe onychodystrophy is not uncommon. Psoriasis tends to worsen as immunodeficiency advances. Lesions may respond to antiretroviral treatment with zidovudine or more conventional therapies such as topical corticosteroids, anthralin, tar, phototherapy, or etretinate. Widespread disease can be difficult to control and potentially immunosuppressive agents such as methotrexate and cyclosporin should be used with caution. There may be a 10 to 20 times higher prevalence of psoriatic arthritis and a 100 times higher prevalence of Reiter's syndrome. Reiter's syndrome (arthritis, urethritis and conjunctivitis) displays psoriasiform skin lesions, palmoplantar keratoderma and circinate balanitis/vulvitis. Reiter's syndrome has been described in the setting of HIV disease and involvement is commonly severe. Atopic dermatitis or an atopic dermatitis-like condition appears to be common in children in HIV disease. Others believe that atopic dermatitis is not affected by HIV infection. The existence of an HIV-associated dermatitis, independent of other types of dermatitis, is controversial.

12. Adverse cutaneous drug eruptions

The incidence of cutaneous drug eruptions is greatly increased in HIV-disease and correlates with the decline and dysregulation of immune function (Figure 21). Between 50–60% of patients with AIDS treated with trimethoprim-sulfamethoxazole develop a morbilliform eruption one to two weeks after commencing therapy. This rash reaches maximal intensity one to two days after its initial appearance, and rapidly resolves with discontinuation of the drug. Other drugs associated with an increased incidence of cutaneous reactions include sulfadiazine and the aminopenicillins. The incidence of toxic epidermal necrolysis and Stevens-Johnson syndrome is also increased in HIV-disease. The most common causative agents in this population are sulfonamides. Treatment of cutaneous drug eruptions necessitates discontinuation of the offending agent and supportive and symptomatic treatment. A discussion of the cutaneous side effects of the antiretroviral and other drugs such as TB drugs, and drug interactions are beyond the scope of this manuscript. 🙋

Figure 20: Extensive seborrhoeic dermatitis of the chest and back. Note some resemblance to a dermatophytic infection (arrows)



Figure 21: Drug eruptions may be mild e.g. morbilliform erythema or severe e.g. Stevens Johnson syndrome



It is important to know the skin and mucosal manifestations of HIV/AIDS. The diagnosis is commonly difficult. In most cases a diagnosis can be made, treatment commenced and the quality of life of the patient improved.

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Press Release


Launch of Fexaway tablets


Adcock Ingram is pleased to announce the launch of Fexaway tablets to be sold by the Restan division.

It is available as Fexaway 120 mg tablets 10's and Fexaway 180 mg tablets 30's. They both contain Fexofenadine hydrochloride, a second generation antihistamine which lacks sedative effects. Fexaway 120 mg is indicated for the relief of symptoms of seasonal allergic rhinitis and the Fexaway 180 mg for the relief of symptoms of chronic idiopathic urticaria.

Fexaway has a convenient once daily dosage for adults and children over the age of 12. Fexaway is available at a competitive price with significant savings to the patient vs. the original product¹.

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 FEXAWAY 120. A 5.7.1. Each tablet contains Fexofenadine hydrochloride 120 mg Reg. No. 41/5.7.1/0133

 FEXAWAY 180. A 5.7.1. Each tablet contains Fexofenadine hydrochloride 180 mg Reg. No. 41/5.7.1/0134 ZA.08.ENE.019

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