

HIV AND SKIN DISEASES

The skin is very commonly involved in HIV infection. Lesions on the skin may result in any stage of HIV infection. They arise from the infection, inter-current illnesses or from drug reactions.

Skin diseases tend to be more chronic, more severe, more resistant to conventional treatments, and often display unusual clinical presentations, compared to those seen in the non-HIV infected population.

History and Examination

Lesions should be characterized fully detailing the onset, site, morphology, color, associated pains, swellings, tenderness, medications, stage of HIV infection (CD4 cell counts), allergy, etc. (see Glossary of Skin Lesions below)

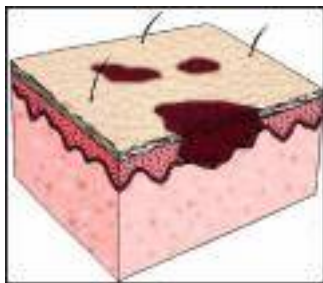
Physical examination of the following parts of the body should be carried out:

1. The mouth
2. The skin
3. The anogenital region
4. The lymph nodes.

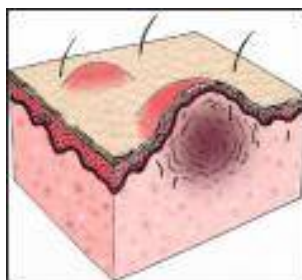
Morphology of skin lesions

1. **Macule**: Non-palpable flat lesion with skin color change
2. **Patches**: Macules that are >5 cm in diameter
3. **Papule**: a palpable lesion <0.5 cm
4. **Plaque**: A confluence of papules leads to a plaque formation.
5. **Pustule**: Vesicle filled with cloudy or purulent fluid such as pus.
6. **Nodule**: palpable, solid, round, or ellipsoidal lesion.
7. **Vesicle (blister)**: circumscribed, elevated lesion that is < 5 mm in diameter containing serous (clear) fluid. Vesicle walls can be so thin that the contained serum is easily seen.
8. **Bulla**: A vesicle with a diameter > 5 mm.
9. **Ulcers**: erosions or abrasions of the skin or mucosa of variable depths

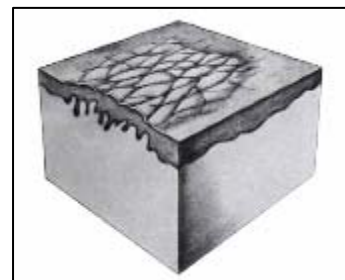
Macule



Papule



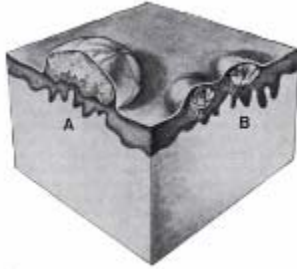
Plaque



Nodule



Vesicule/ Bullae



Pustule



Skin Manifestations of Early Acute HIV Prior to Seroconversion

There may be a transient erythematous maculopapular rash for 1 day. This rash may involve the whole body or just the trunk. Its onset is usually after a fever has subsided

Treatment: symptomatic, PCM

LESIONS IN THE MOUTH

Lesions in the mouth are common presentations in HIV infection. When such lesions are present, consider the following:

A. APTHOUS ULCER



Canker Sores

The typical ones are 3-10mm in diameter and heal spontaneously after a few days. They present as single or few painful lesions found on the mucosa of the mouth usually between the cheeks and the lips.

They are white circular lesions surrounded by an erythematous region.

Treat: Topical anaesthetic 2% lidocaine viscous 5 ml (1tsp) as an oral

rinse every 3 hours or before meals provides short term relief and facilitates eating. For large/persistent ulcers, consider use of corticosteroids- prednisolone

B. HERPES SIMPLEX VIRUS



Suspect **Herpes Simplex Virus** if multiple small lesions are present and they are painful

Treat: Acyclovir 400mg 5X daily for 5 days. Famciclovir 500mg 2X daily for 7 days.

Others conditions with multiple ulcers:

- *Cytomegalovirus*: Large ulcers with severe immunodeficiency in advanced disease: which will usually be a part of a generalized CMV infection. Patient may have fevers.
- *HIV primary infection*: If these ulcers are found both in the oral and genital mucosa.

C. ORAL CANDIDIASIS



They present as **white patches** which occurs primarily in the mouth but may extend to the throat in advanced disease. Patient complains of odynophagia (painful swallowing) and less commonly dysphagia (difficulty swallowing) especially with oesophageal involvement. They are common in HIV infection even when the CD4 count > 200. It also responds well to HAART

Treat: Oral nystatin 200,000-400,000U 6 hourly, fluconazole 200mg loading dose then 100mg per day until symptoms resolve,

ketoconazole, Amphotericin B

D. ORAL HAIRY LEUKOPLAKIA



Present with white verrucous (wart-like) plaques that do not rub off. It occurs as parallel white or grayish rows arranged vertically on the lateral aspects of the tongue. It is more often bilateral, but unilateral rows may occur. Caused by Epstein Bar virus and almost exclusively found in patients with untreated advanced HIV infection.

Treat: Aciclovir, Ganciclovir, Foscarnet. Responds well to HAART.

E. ORAL CHANCRE OF SYPHILIS



This presents as a chancre (a destructive sore/small red papule/crusted erosion that breaks down to become round/oval, indurated and slightly elevated with a eroded surface that exudes a serous fluid) which may be painful. Note: examine the genital area for chancres also.

Treat: 2.4 million U each of Benzathine Penicillin weekly. Avoid use of benzathine penicillin G in patients in whom early neurosyphilis cannot be excluded. In such patients, high dose

penicillin G (6X5 Mega or 3X10 Mega IV should be given for 2 weeks (early syphilis) or 3 weeks (late syphilis).

F. ORAL KAPOSI SARCOMA



This presents as solitary, or a few asymptomatic purple macules or nodules commonly affecting the hard palate. Lesions begin with purplish erythema and progress to plaques and nodules that ulcerate easily. **Treat:** HAART is the first line treatment for Kaposi Sarcoma. The protease inhibitor Indinavir has been found to have antitumor effects in KS. Also consider the use of Vinblastine, Vincristine, Doxorubicin.

LESIONS ON THE SKIN

PRURITUS/ ITCHING



Scratch Marks due to pruritus

Pruritus may present alone or with rashes. Common causes of pruritus in HIV infection are:

1. Scabies
2. Dry skin
3. Psoriasis
4. Sulfa allergy
5. Pruritic papular eruption
6. Nodular prurigo
7. Staphylococcal folliculitis
8. HAART associated

Chronic unremitting pruritus is common in HIV infection. One in three patients is affected. Etiology remains unclear in most patients, however rule out the common causes.

Treat: Symptomatic with antihistamines and/or corticosteroids.

A. SCABIES



Rash due to scabies on the buttocks

Scabies presents with intense itching especially at night with or without a papular eruption. It is common in the interdigital areas, palmer surface of the hands, axillae, periumbilical region, elbows, along the belt lines, areola of the breasts in females or penile shaft in males and on the lower buttocks. Burrows appear as fine, wavy and slightly scaly. There may be a small papule/

vesicle at one end. Excoriations/eczematous eruptions may be seen.

Treat: Topical benzyl benzoate, Permethrin 5% cream (Elimite), Lindane (Kwell) topical salicylic ointments/soaps. Apply to whole body from face downwards. Leave on for 12-24 hours and rinse off. Wash all clothes and beddings concomitantly. Retreat again in 1 week if needed.

B. SEBORRHOEIC DERMATITIS



Seborrheic Dermatitis on hairline

Appears in areas rich in sebaceous glands e.g. scalp, forehead, eyebrows, nasolabial folds etc. They develop yellowish, oily scales and crusts on mildly erythematous to very red plaques. The patient often presents with itching

Treat: Salicylic acid 2-3% to remove crusts, topical antifungals like ketoconazole cream or tar containing products. For the scalp, selenium sulphide (selsun), Zinc pyrithione (Head and Shoulders)



C. DRY SKIN (Xerosis/ Xeroderma/ Ichthyosis)



Presents with fine scale or cracks seen with tangential light. The common areas involved are the anterolateral lower legs (most commonly affected), back and flanks, abdomen and waist and the arms. It worsens with cold, dry weather.

Treat: Moisturize by soaking in water, limit soap use, briefly pat dry, and use ointments. Topical Agents including 10% urea or 10-20% salicylic acid.

SKIN LESIONS

VESICLES

D. HERPES ZOOSTER IN HIV



Rash preceded by pain of 2-3 days. Vesicles appear on an erythematous base that follow the cutaneous distribution of one or more dermatomes. There is hyperesthesia and pain may be severe. Eruptions mostly in the thoracic or lumbar regions and are usually unilateral. In advanced disease, grouped vesicles may be absent and only erosions or ulcers may be visible. **Treat:** Analgesics, Acyclovir 400mg 5X daily for 5 days. Famciclovir 500mg 2X daily for 7 days.

PAPULES

E. PAPULAR DERMATOSES



Presents as skin coloured to red papules (2-5mm) or with combined eruptions consisting of papules and pustules. They resemble the prurigo of atopic dermatitis. Commonly found on the extensor surfaces of the arms, back of hands on trunk. Etiology is heterogenous i.e microbiological agents or drug hypersensitivity reactions.

Treat: Offending agent. Consider use of antihistamines and/or topical corticosteroids.

F. MOLLUSCUM CONTAGIOSUM



Caused by a pox virus infection, distinguished by small dome-shaped papules (bumps) on the face, upper trunk or extremities that have a typical central umbilication.

Treat: Current treatment is mainly cosmetic. It often involves application of liquid nitrogen or cryotherapy (using liquid nitrogen) to the papules as a means of excising them.

PLAQUES

G. PSORIASIS



This presents as dry, well circumscribed, silvery, scaling papules and plaques of various sizes. Central clearing and coalescence of the lesions produce diverse shapes. Differentiate from seborrhoieic dermatitis.

Treat: It responds well to HAART especially with Zidovudine. Localized lesions can be treated with topically with corticosteroids, anthralins or calcium antagonists (calcipotriol or tacalcitol)

NODULES

H. KAPOSI SARCOMA



Typical findings are initially solitary, or a few asymptomatic purple macules or nodules, which are usually distributed along relaxed skin tension lines. Rapid growth can lead to localized pain and a yellow-green discoloration of the area around the tumor as a result of hemorrhage. Further progression of the tumor can lead to central necrosis and ulceration. The tumors may bleed easily.

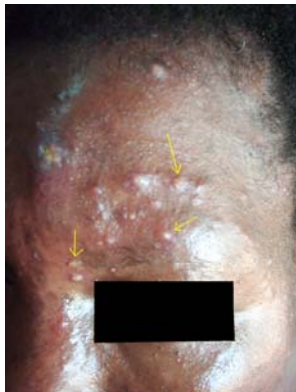
Plaque-like and nodular KS lesions, often become confluent and can be accompanied by massive edema.

Treat: Responds well to HAART especially with the PI ritonavir or Indinavir which has been found to have antitumor effects in KS.

Also consider the use of Vinblastine, Vincristine, Doxorubicin.

PUSTULES

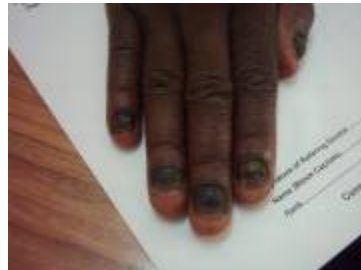
I. FOLLICULITIS



These present as pustular, papular and oedematous-papular lesions involving the chest, proximal arms, head neck and face. Possible causes include staphylococcus, malassezia furfur and drugs such as Indinavir. The lesions are pruritic and chronic, but may display periods of improvement.

Treat: Depends on the etiologic agent. There is significant improvement with HAART. Consider prednisone with a initial oral dose of 70mg and tapered over a 1-2 week period, metronidazole 250mg three times daily for three weeks may be useful. Potent topical steroids, antihistamines and Dapsone.

J. TINEA



This produces a superficial, scaling, round erythematous plaques, that expand centrifugally with an inflammatory edge and central clearance.

It may also affect the nails with discoloration (yellow, green, black), thickening and growth disturbances.

Treat: Superficial infections with azoles applied twice daily. If severe inflammatory disease, add topical corticosteroids for 3-4 days to achieve quick relief of discomfort. Deep infections and those involving terminal hairs and nails need systemic treatment with Griseofulvin (500-

1000mg/day) for 9 months or longer, Terbinafine (250 mg/day), Fluconazole ((50mg/day) for 2-3 months

ANOGENITAL LESIONS

VESICLES

K. HERPES SIMPLEX



Present as small tense vesicles on an erythematous base which may be single clusters or groups that coalesce. They later dry forming a thin yellowish crust and often heal spontaneously. There may be associated pain.
Treat: Acyclovir 400mg 5X daily for 5 days.
Famciclovir 500mg 2X daily for 7 days.

L. SYPHILITIC CHANCRE



This presents as a chancre which may be painful. Patients with mild-moderate immunosuppression may have cutaneous lesions that resemble primary or secondary syphilis.

Treat: 2.4 million U each of Benzathine Penicillin weekly. Avoid use of benzathine penicillin G in patients in whom early neurosyphilis cannot be excluded. In such patients, high dose penicillin G (6X5 Mega or 3X10 Mega IV should be given for 2 weeks (early syphilis) or 3 weeks (late syphilis).

M. CONDYLOMATA ACUMINATA (Molluscum Acuminata, Genital Warts)



Presents as a flesh coloured or hyperkeratotic, verrucous papules with central umbilication.

Treat: There is no clear impact on HAART. Destruction with cryotherapy, electrocautery, carbon dioxide, trichloroacetic acid or podophyllin.

LESIONS ASSOCIATED WITH ANTIRETROVIRALS

NUCLEOSIDE ANALOG REVERSE TRANSCRIPTASE INHIBITORS (NRTIS)

1. **AZT, Zidovudine:** Drug eruptions mostly macular, rarely severe reactions like erythema multiforme and Stevens Johnsons Syndrome (SJS). Vasculitis, urticaria, hyperhidrosis, tongue ulcers, pigmentation and lichenoid eruptions of mucosal membranes.

DRUG ERUPTIONS: Drug eruptions vary from a mild rash to toxic epidermal necrolysis. Onset may be sudden (eg, urticaria or angioedema from penicillin) or delayed for hours or days (morbilliform or maculopapular eruptions from penicillin or sulfonamides) or for years (exfoliation or pigmentation from arsenic). The lesions may be localized (fixed drug eruptions, oral ulcers, dermatitis in light-exposed areas), but many are generalized.

Erythema Multiforme



SJS following Nevirapine use



2. **D4T, Stavudine:** Drug eruptions with fever
3. **3TC, Lamivudine:** Exanthemas
4. **DDI, Didanosine:** Drug eruptions and itching, erythema multiforme, oral dryness.
5. **FTC, Emtricitabine:** Exanthemas especially in combinatyion with DDI and efavirenz
6. **ABC, Abacavir:** Maculopapular exanthemas, hypersensitivity reactions (stop treatment and DO NOT RESTART)

NON-NUCLEOSIDE ANALOG REVERSE TRANSCRIPTASE INHIBITORS (NNRTIs)

1. **NVP, Nevirapine:** Frequent drug eruptions, severe reactions mostly occurring in the first 6 weeks of treatment including SJS and a few case of toxic epidermal necrolysis.
2. **EFV, Efavirenz:** Frequent macular or urticarial exanthems . Light exanthems can regress spontaneously without discontinuation of treatment. If sever, discontinue treatment.

PROTEASE INHIBITORS

1. **Saquinavir:** Aphthous oral lesions, cheilitis, exanthemas, rarely SJS, Bullous eruptions and popular pruritic folliculitis.
2. **Ritonavir:** Exanthemas, popular pruritic folliculitis, peri-oral paraesthesia
3. **Nelfinavir:** Infrequent exanthemas.
4. **Atazanavir:** Exanthemas, hyperbilirubinemia, in some cases with jaundice and scleral icterus.
5. **Lopinavir/r:** Exanthemas.