

Chapter 9

Skin and Wound Care***Overview***

With the advent of HIV/AIDS in sub-Saharan Africa the prevalence of dermatological problems has dramatically increased from 15% to 30% in outpatient clinics in district hospitals. It is estimated that 92% of patients with HIV will experience skin problems during the course of the illness.

Bacterial infections, fungal infections, cutaneous drug reactions, syphilis, and Kaposi's sarcoma are seen at all stages of HIV disease. Early initiation of antiretroviral therapy (ART) helps reduce the severity of skin disease in HIV/AIDS. In earlier stages of HIV disease, when the CD4 count is 200–500 cells/mm³, seborrhoeic dermatitis, scabies, dry skin, herpes zoster, HPV infections, and papulopruritic eruptions are commonly encountered. As the disease progresses more atypical and severe skin lesions predominate and treatment becomes less effective. In advanced AIDS, with CD4 counts <200 cells/mm³, oral candidiasis, oral hairy leukoplakia, folliculitis, herpes simplex and cytomegalovirus infections, molluscum contagiosum, and Kaposi's sarcoma are common (Hartshorne, 2000).

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General Principles of Skin Care

Assessment

Careful clinical assessment can lead to early diagnosis and therefore better treatment. Accurate diagnosis of skin disorders largely depends on taking a careful history and a thorough examination in good light. Simple laboratory examinations such as skin scraping for fungus and staining with 20% KOH can confirm the diagnosis. In doubtful diagnostic situations, it is best, if possible, to do a skin biopsy for culture or histology. Blood tests for HIV and syphilis should form the basis of an early assessment of selected patients in primary care.

The following are features of skin conditions in HIV/AIDS.

- Common conditions may present with unusual or florid lesions (e.g., eczema, acne, and skin infections).
- Certain specific presentations have diagnostic value in HIV/AIDS (e.g., aggressive Kaposi's sarcoma).
- Conditions may be seen in an unusual setting (e.g., herpes zoster in young adults).
- Multiple infections are frequently seen in the same patient (e.g., fungal infections and molluscum).
- Severe drug reactions are more frequent (see section on Cutaneous Drug Reactions).
- Skin pain is typically caused by wounds, pressure sores, and post-herpetic neuralgia.

Management

Treating Reversible Causes

Treat underlying pathological processes (e.g., scabies, folliculitis, fungal infections). See specific sections below.

Non-pharmacologic Symptom Management

People with skin disease tend to feel self-conscious and family members and friends may avoid touching them. Encourage carers to provide both physical and emotional support, to reduce this sense of isolation. In some cases, listening to the patient and touching and hugging them may be of more value than an ointment.

Encourage patients and families to follow the approach to managing skin problems suggested in Table 9.1. In general, certain measures such as over-bathing, the use of antiseptics and strong soaps, and the rubbing of skin with abrasive material should be avoided.

Pharmacological Symptom Management

Simple pharmacological agents can often bring considerable relief and improve quality of life.

Address secondary infection and itching as described in the sections of this chapter.

Address skin pain both topically and systemically as necessary (see sections on herpes zoster and decubitus ulcers). For topical analgesia, soak dressings in lignocaine or mix 1 ampoule lignocaine into a carrier medium such as aqueous cream.

Avoid prescribing topical treatments, especially steroids, without a proper clinical diagnosis to avoid unnecessary suffering.

Table 9.1: Skin Care for People with HIV

Intervention	Rationale
Minimise shower or bath time, and do not bathe or shower more than once a day. Apply moisturiser such as Vaseline or emulsifying ointment after bathing. Humidify the air by boiling water.	Prevents drying of skin.
Avoid hot water and sitting near fire or heater.	Prevents vasodilation, which exacerbates itching.
Use soap sparingly if at all. For soap, use gentle cleansers (plain white toilet soap or aqueous cream); avoid deodorant soap. Add soluble bath oil or aqueous crème 1 tbs to bath water.	Prevents removal of skin's natural moisture; deodorant soap dehydrates and may irritate the skin.
Use soft, non-abrasive sponges, wash-cloths and towels. Minimise friction during cleansing and drying (pat skin dry).	Prevents mechanical irritation.
Moisturise frequently with water-soluble lotion or emollient. Apply two to three times a day, including after bath while the skin is still damp and at bedtime. (Products include Vaseline and emulsifying ointment.)	Adds or helps to retain moisture.
If above lotions are ineffective, use lactic acid, urea (10 % urea cream), or sodium lactate moisturisers, or 20% salicylic acid.	Adds or helps to retain moisture
Keep topical creams and ointments cool or refrigerate.	The cooling sensation has an antipruritic effect.
Encourage fluid intake, but avoid or discourage drinking alcohol.	Maintains hydration of skin.
Avoid restrictive or non-absorbent clothing.	Guards against mechanical irritation.
Keep fingernails short and smooth.	Guards against breaking the skin while scratching.
Wash hands frequently.	Prevents contamination of open areas.
Use fragrance-free products rather than unscented products.	Unscented products may contain fragrance masking which elicit allergic responses in some patients.
Avoid lanolin-based creams.	Produces a high rate of allergic response.

Source: Tuthill, 2003.

Itchy Lesions

Dry Skin (Xerosis)

Assessment

Dry skin is found in almost all patients with advanced disease but is particularly severe in patients who have suffered a slowly progressive debilitating process with persistent diarrhoea and weight loss. Generalised dryness of the skin with flaking, itching, cracking, and fissuring makes skin vulnerable to secondary infection. Ichthyosis is the term used for severe dryness, forming fish-like scales. This may be seen in chronic illness, possibly aggravated by nutritional deficiency.

Management

Non-pharmacologic Symptom Management

See Table 9.1. In particular, suggest a moisturiser and a mild soap (or aqueous cream as a soap substitute) to reduce dryness of the skin.

Use emulsifying ointment or moringa oil, applying twice daily after washing.

Emollient ointments containing urea may give relief and can be applied over large areas of skin.

Pharmacologic Symptom Management

For itching, give antihistamines (see Management of Papular Pruritic Eruptions).

Papular Pruritic Eruptions

Assessment

The most common and troublesome itchy skin lesion in people with HIV/AIDS is 'papular pruritic eruption of HIV' (PPE), a recurrent or persistent eruption of itchy papules, which heal with pigmentation (see Photo 9.1). The term is applied to this clinical picture but may actually describe a number of different conditions, such as severe insect bite allergy (papular urticaria), or types of folliculitis. In differential diagnosis, consider scabies, eczema, and fungal infection.

Management

Pharmacologic Symptom Management

Inflammation: Use potent topical steroids such as betamethasone valerate 0.1% to control inflammation. Follow with a mild topical steroid (hydrocortisone 1%) to maintain symptomatic relief.

Topical relief for itching: Use topical antipruritics:

UEA with 1% menthol or
calamine lotion or

hydrocortisone 1% with menthol 2%
and phenol 0.25%

Severe itching: Give a sedating oral antihistamine if itch is severe:

promethazine 10-25 mg nocté or

chlorpheniramine 4-12 mg daily (4 mg 3 times/day) or

hydroxyzine 25-50 mg, 8-12 hourly or nocté

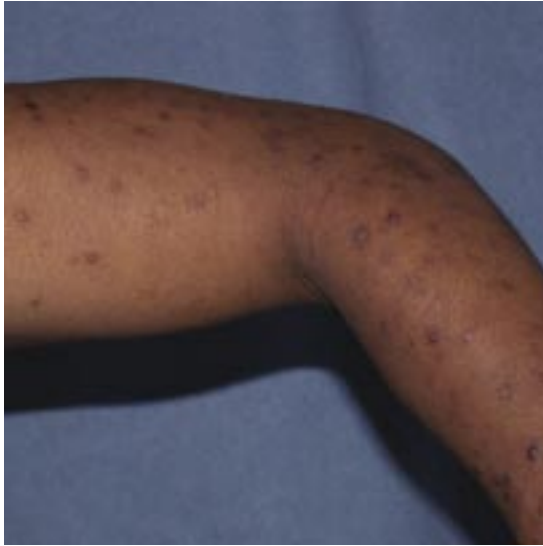


Photo 9.1 Papular pruritic eruption, showing typical pigmented papules on the arm. Lesions may be seen throughout the body. Photo courtesy Division of Dermatology, University of Cape Town.



Photo 9.2 Young woman with crusted scabies, showing thick scales on her ear. Photo courtesy Division of Dermatology, University of Cape Town.

Scabies

Assessment

Scabies is a common mite infestation that has a classic presentation in early HIV infection, with erythematous pruritic papules and burrows on the finger webs, wrists, anogenital, and umbilical region. In babies, lesions are often more extensive and can affect the palms, soles, and scalp.

Lesions may be accompanied by urticaria or eczema/dermatitis. Because it is common to see impetigo coupled with scabies in children it is very important to treat with penicillin to avoid streptococcal glomerulonephritis.

Less commonly, severely immunosuppressed patients may develop crusted scabies (Norwegian scabies), with thick scaly areas resembling psoriasis — found on the scalp, face, hands, back and trunk (see Photo 9.2). The multitude of mites present makes this condition highly contagious.

Management

Treating Reversible Causes

Treat all household members and healthcare workers with one of the following:

benzyl benzoate 25% lotion: wash off after 24 hours; for young children, dilute 1:2 in water or reduce time

gamma benzene hexachloride 1% lotion: wash off after 24 hours

sulphur 5–10% ointment: apply daily for 3 days

Do not repeat lotion application more than once. Overtreatment may cause irritation/eczema.

Monosulfiram soap (TETMOSOL) is not effective.

Advise families that keys to successful treatment of a scabies infestation include adherence to careful hygiene, washing all clothes and bedclothes, and treating all household members at the same time as described below.

If available, consider treating crusted scabies with oral ivermectin 100–200 micrograms/kg body weight in a single dose.

Scaly/Dry Lesions

Fungal and Yeast Infections

Assessment

Fungal skin infections tend to be extensive and recurrent in HIV/AIDS. Tinea, or dermatophyte infection, is usually easy to recognise, with a sharply defined scaly advancing edge, and may develop at any site on the skin surface, often at multiple sites and caused by multiple organisms (see Photo 9.3). Tinea capitis, more common in children, may manifest with grey patches of scaling, a seborrhoeic dermatitis-like picture, or crusting with pustulation (kerion), and patches of hair loss, and/or hair loss resembling that of alopecia areata. Yeast infection (candidiasis) can involve not only the oral and vaginal mucosa but the body folds and nails (Wilson, 2002).



Photo 9.3 Extensive tinea corporis (fungal infection). Note the well-defined advancing edge, which is characteristic. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Treating Reversible Causes

Systemic fungal or yeast infections: Give amphotericin B 0.6 mg/kg/day IV.

Oral/vaginal candidiasis: Gentian violet 0.5% aqueous solution can be used topically as first line treatment. Then follow with Fluconazole 200mg PO daily for 1week.

Vaginal/pelvic candidiasis: Give fluconazole 150 mg single dose (in some countries, fluconazole is otherwise reserved for cryptococcal meningitis).

Severe vaginal sores: Apply Miracle Paint from Uganda (see Box 9.1). Nystatin works on the fungus, aciclovir on the virus, and metronidazole on anaerobic bacteria, which reduces sloughing and bad smell.

Extensive dermatophytosis (tinea): Give griseofulvin 500 mg daily with milk.

If available, consider:

Candidiasis: Give ketaconazole 200 mg daily for 2 weeks.

Topical treatment: Apply Whitfield's ointment or imidazole creams, such as 1% clotrimazole.

Resistant vaginal candidiasis: Give clotrimazole 100 mg pessaries at night for 6 days.

Non-pharmacologic Symptom Management

Keep body folds clean and dry, using soap and water and dusting with cornflour or talc.

If necessary, separate surfaces with cotton material or gauze.

Pharmacologic Symptom Management

Systemic treatment for severe itching: give a sedating antihistamine such as promethazine.

Box 9.1:

Miracle Paint	
Agent and dose	Directions
aciclovir 1 capsule or tablet (200 mg) nystatin suspension 5 mL (500,000 units) and metronidazole 2 tablets (400 mg) crushed	Mix together. For topical use on skin and mucous membranes (mouth or genital area). For skin, apply 6 hourly for 7 days. Symptomatic improvement in 24 hours.

Source: Hospice Africa Uganda, 2002.



Photo 9.4 Generalized erythema (erythroderma) of severe psoriasis. This clinical picture may also be seen with severe eczema or drug reaction. Photo courtesy Division of Dermatology, University of Cape Town.

Seborrhoeic Eczema

Assessment

In people with HIV/AIDS, eczema is usually of the seborrhoeic type, involving axillae, groin, neck, and scalp, and tends to be more severe and recurrent. Often complicated by infection, it produces wet or crusted skin lesions that may spread to involve the whole body surface ('erythroderma' — see Photo 9.4) but is usually most marked in body folds. Severity increases as immune system deteriorates.

Management

Non-pharmacologic Symptom Management

Treat secondary infection with topical povidone-iodine.

Use a moisturizer (see Table 9.1).

Wrap the skin with damp cotton material to reduce itching and inflammation if the patient is very uncomfortable (this can be applied over moisturiser, steroid ointment, or povidone-iodine).

Pharmacologic Symptom Management

Eczema: Treat vigorously with adequate amounts of potent or moderately potent topical steroids (hydrocortisone 1% twice daily if minor, or betamethasone 0.1% ointment twice daily if severe). Use a milder steroid when inflammation settles (hydrocortisone 0.5%).

Infection: When acute eczema is complicated by secondary infection, a systemic antibiotic such as cotrimoxazole may be needed.

Severe itching: Give a sedating antihistamine such as promethazine.

Non-itchy Papules and Nodules

Molluscum Contagiosum

Assessment

Multiple skin-coloured papules are commonly due to molluscum contagiosum, when the characteristic findings are multiple smooth papules with central depressions (umbilication). These are common on the face and are disfiguring (see Photo 9.5). Molluscum contagiosum may spread extensively.

Other infections, including bacillary angiomatosis and systemic yeast or fungal infections, may mimic this condition and should be considered in differential diagnosis.

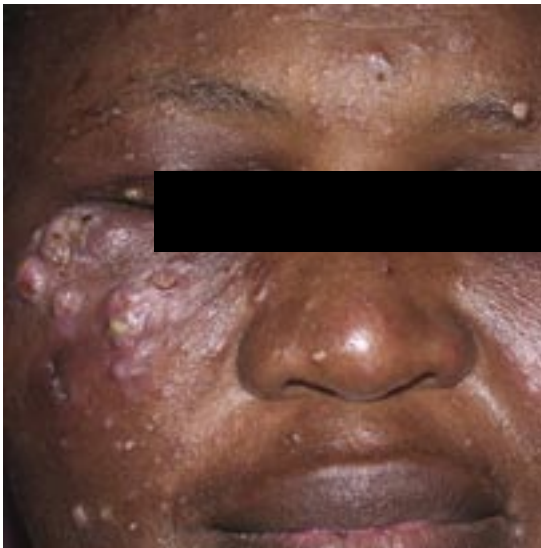


Photo 9.5 Large molluscum contagiosum on the face. The central 'dimpling' of the lesions is characteristic but other infections, such as *Cryptococcus*, may occasionally look similar. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Treating Reversible Causes

If available, use local destructive methods (such as liquid nitrogen) or imiquimod or topical retinoid.

Viral Warts

Assessment

Viral warts are common, particularly in severely immunosuppressed children. Warts may be large and troublesome and usually appear in the anogenital area.

Management

Treating Reversible Causes

If available, consider using local destructive methods if lesions are causing distress. Lesions tend to recur after treatment so excision is rarely helpful. Use topical 25% podophyllin or 50% trichloroacetic acid. If the lesions are very distressing, it may be necessary to cauterise under general anaesthetic. The surrounding normal skin must be protected with Vaseline. Apply 25% podophyllin carefully once a week to the wart and wash after 4 hours. Avoid use during pregnancy.

Kaposi's Sarcoma

Assessment

Single or multiple brown-purple lesions are highly suggestive of Kaposi's sarcoma (KS), particularly when associated with swelling (lymphoedema). Lesions are usually multiple and occur frequently on the face, oral mucous membranes (see Chapter 8: Mouth Care), and legs, but may occur on other areas. Often KS starts as a bruise-like lesion (flat purplish patches), which progresses into firm nodules or plaques (see Photos 9.6 and 9.7). They are usually painless until they invade the lymph nodes, causing painful oedema. Lesions of the gingival margin or palate make the diagnosis almost certain and may indicate underlying lung involvement.

Less common causes of skin nodules include tuberculosis, leprosy, fungal infection, and lymphoma.



Photo 9.6 Advanced Kaposi's sarcoma on the thigh, with secondary infection and swelling. Photo courtesy Division of Dermatology, University of Cape Town.



Photo 9.7 Man with long-standing Kaposi's sarcoma of the foot and lower leg. The nodules may bleed or become secondarily infected. Swelling of the legs, (lymphoedema), is usually associated. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Non-pharmacologic Symptom Management

If lymphatic involvement causes oedema of the legs, provide gentle compression.

Pharmacologic Symptom Management

Treat secondary infections if necessary.

If available, consider the following:

Give ART, which reduces immunosuppression, usually resulting in partial or complete tumour regression.

If localised, consider radiotherapy.

If extensive, or troublesome, consider referring patients with CD4 counts >200 cells/mm³ for chemotherapy.

Blisters and Ulcers of the Skin

Herpes Zoster

Assessment

Herpes zoster (shingles) is usually easily identified and is most frequently seen in the early stages of the illness or when starting antiretroviral treatment. It may be missed if the patient presents with a localised crusted area or widely disseminated infection.

Herpes zoster infection is usually an erosive vesicular linear eruption which is unilateral and painful (see Photo 9.8). As immunodeficiency progresses it may involve multiple nerves or be disseminated (as in chicken pox). It is contagious for contacts who have not had chicken pox. Post-herpetic neuralgia and scarring may be very troublesome.



Photo 9.8 Young woman with characteristic herpes zoster, showing linear distribution of lesions. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Treating Reversible Causes

Starting aciclovir early in the infection may help resolve the severity of the lesions. Also give oral (systemic) aciclovir if there are complications, such as eye or facial nerve involvement, or if infection is disseminated, or patient is severely immunosuppressed. Give aciclovir 200 mg PO 5 times/day for 5 days.

Non-pharmacologic Symptom Management

Frangipani milk helps reduce pain by paralysis of the nerve endings and helps healing with minimal scarring (Hospice Africa Uganda, 2002). Use only for post herpetic neuralgia after the skin lesions have cleared, not when vesicles are open. Apply or paint frangipangi milk 3 times per day (see Photo 9.9). Make the fluid fresh daily.



Photo 9.9 Frangipani tree.

Pharmacologic Symptom Management

Treat or prevent secondary bacterial infection.

Treat pain as effectively as possible starting with analgesics according to the WHO 3-Step Analgesic Pain Ladder (see Chapter 4: Pain Management).

For severe or persistent pain, amitriptyline may be effective (amitriptyline 50 mg, titrated upwards for good relief).

Herpes Simplex

Assessment

Herpes simplex may appear on the genitals or mouth (see Chapter 8: Mouth Care) or elsewhere on the skin as typical groups of vesicles on a red background, but may also lead to chronic genital ulcers without obvious blisters (see Photo 9.10). In someone with pre-existing skin disease, it may spread over a large area. Herpes simplex lesions heal in one to two weeks in people who are in the early stages of HIV disease; however, in immunosuppressed individuals the virus may cause a disseminated eruption of haemorrhagic vesicles, or bullae, or a persistent destructive ulcer (see Photo 9.11). In this case treatment may need to be prolonged.

Differentiate herpes simplex from another cause of chronic ulceration, tuberculosis, which usually arises from underlying tuberculous lymph nodes (see Photo 9.12). Other causes of generalised crusted lesions include systemic bacterial or fungal infection, and if this is suspected, a biopsy and culture are needed for diagnosis.



Photo 9.10 Perianal ulcers. The commonest cause for anogenital ulcers is herpes simplex. CMV infection may also be present. Photo courtesy Division of Dermatology, University of Cape Town.



Photo 9.11 Disseminated herpes simplex infection. Note the lesions have necrotic centers and are all similar. Photo courtesy Division of Dermatology, University of Cape Town.



Photo 9.12 Chronic ulcer at unusual site. The position of this ulcer suggests tuberculosis, arising from infected lymph nodes. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Treating Reversible Causes

Where available, give aciclovir if extensive, if the eye is involved, or if there is persistent ulceration.

Pharmacologic Symptom Management

Treat or prevent secondary bacterial infection.

Miracle Paint (see Box 9.1) is most effective and affordable.

Impetigo and Ecthyma

Assessment

Impetigo is a superficial bacterial infection of the skin, caused by *Staphylococcus aureus* or *Streptococcus pyogenes*. The lesions are crusts, often with a yellowish colour.

Ecthyma is a skin ulcer caused by a deeper *Staphylococcus aureus* infection (see Photo 9.13). It is the most common ulcer of the skin. Both impetigo and ecthyma may occur spontaneously or may complicate other skin lesions, such as insect bites, eczema, scabies or minor abrasions.

Skin ulcers may also be seen in other infections, including nodulo-ulcerative syphilis (which may appear as ulcers, papules or nodules of both mucosa and skin — see Photo 9.14) and *Pseudomonas* septicaemia. Secondary syphilis still presents commonly as non-itchy macular lesions affecting palms and soles or as moist ulcers in genital areas.



Photo 9.13 This leg ulcer is due to ecthyma (staphylococcal infection) and will heal rapidly with good wound care. Photo courtesy Division of Dermatology, University of Cape Town.



Photo 9.14 Young woman with secondary syphilis. The papular rash is typical and may be associated with systemic symptoms and mucosal lesions. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Treating Reversible Causes

Give antibiotics to combat *Streptococcus* and *Staphylococcus* (flucloxacillin and benzathine penicillin are usually effective).

If lesions do not clear quickly, consider another, possibly opportunistic, infection and test for syphilis, and take swab and/or biopsy for culture and histology. Treat secondary syphilis with benzathine penicillin 2.4 MU IM weekly for 3 weeks..

For patients with penicillin allergy, give either erythromycin 500 mg 4 times/day or doxycycline 100 mg twice daily for 2 weeks.

Non-pharmacologic Symptom Management

Advise regular washing with soap or povidone-iodine solution.

Pharmacologic Symptom Management

Apply a topical antibacterial ointment.

Decubitus Ulcers

Assessment

Being bedridden may lead to a breakdown of skin and the development of bedsores (decubitus ulcers), particularly if the patient is paraplegic or hemiplegic or has reduced sensation or mobility from Parkinson's disease or a fracture. The condition is compounded by incontinence and moisture on the dependent skin.

Health care workers, especially nurses, should assess skin integrity carefully and frequently to identify early symptoms and offer preventive treatment (see Table 9.2). Teach family carers preventive measures as well as signs of decubitus ulcers.

Table 9.2: Stages of Pressure Ulcers Defined

Stage I	A nonblanchable area of erythema, which does not resolve after 30 minutes of pressure relief. In dark-skinned persons this may present as discoloration of the skin, warmth, edema, induration, or hardness. The skin is <i>always intact</i> with a stage I pressure ulcer.
Stage II	Partial thickness skin loss involving epidermis, dermis, or both. The ulcer is superficial with a pale pink wound bed and serous (never serosanguinous) drainage. May present as an abrasion or blister.
Stage III	Full thickness skin loss involving damage to or necrosis of subcutaneous tissue. Wound bed is beefy pink but may have some necrotic tissue. There may be undermining of peri-wound skin or tunnelling. Drainage may be serosanguinous. Underlying support structures are not visible.
Stage IV	Full-thickness tissue loss with extensive destruction, tissue necrosis, or damage to muscle, bone, or supporting structures. Support structures are visible (tendon, joint capsule, bone fascia, muscle).

Source: Tuthill, 2003.

Pressure ulcers cannot be accurately staged until the deepest viable tissue layer is visible. Ulcers covered with eschar or necrotic tissue cannot be staged until they are debrided. They can be documented as 'full-thickness pressure ulcer unable to stage due to the presence of necrotic tissue'.

Management

Treating Reversible Causes

To prevent ulcers, teach family to:

Relieve pressure by turning patient frequently (2 hourly) and positioning with pillows.

Massage pressure points to increase circulation.

Maintain hygienic skin care.

Pharmacological Symptom Management

Wound treatment depends on the severity of the pressure sore (see Table 9.3).

Infection: Treat with topical and/or systemic antibiotics.

Odor: Treat the offensive odour often associated with such wounds (often due to contamination by anaerobic bacteria): see section on fungating tumours and odours below.

Bleeding: If bleeding is a problem in a bedsore:

Apply calcium alginate dressing, a dressing containing fibres of mixed sodium and calcium alginate, to the bleeding area. The dressing of calcium alginate provides a moist healing environment as well as being a haemostat.

or

Apply adrenalin topically to stop bleeding. Dilute 1 mL adrenaline ampoule (1 in 1000) with 10 mL normal saline and use topically.

Systemic pain management: Administer systemic analgesia using the WHO ladder. Shallow pressure sores are most painful and respond to Step 1 analgesics.

Topical pain management: Treat with dressings containing lignocaine in addition:

For each 150 mL of aqueous cream with 800 mg metronidazole (tablets crushed finely) that is applied to the wound add 2 mL 2% lignocaine to the mixture (which may also be strengthened).

Table 9.3: Treatment of Decubitus Ulcers

<p>Stage I Red areas of unbroken skin</p>	<p>Clean gently with salty water and allow to dry (WHO, 2004). <i>or if available</i> Apply a protective film, e.g. transparent film dressing.</p>
<p>Stage II Areas with slight skin breakage</p>	<p>Apply ripe paw paw flesh, and leave the wound open to the air (WHO, 2004) <i>or if available</i> Apply a hydrocellular foam or hydrocolloid dressing. These dressings help to provide a moist wound environment which promotes healing.</p>
<p>Stage III and IV Deep and large sores</p>	<p>Every day clean gently with diluted salt water, fill the bedsore area with pure honey or ripe paw paw flesh and cover with a clean light dressing to encourage healing (WHO, 2004). <i>or if available</i> When the bedsore is necrotic (Stage III), the first step in treating is to reduce and eventually eliminate the necrosis so as to promote healing. Hydrogel can be used with good results. Hydrogel acts by absorbing exudates from the wound and rehydrating the wound, which produces rapid debridement of necrotic wounds and removal of slough without damaging existing fragile granulation tissue. Although hydrogel does not require daily changes of wound dressings it may be necessary to do daily or more frequent dressing changes due to the discharge produced by many necrotic bedsores. To reduce the cost of hydrogel, mix 15 gm of hydrogel with 100 mL of aqueous cream or with one small tube of water-based lubricating gel (anecdotal).</p>

Fungating Tumours and Odours

Assessment

Skin tumours that cannot be excised may give rise to very unpleasant odours, which may be distressing to the patient. Such tumours include advanced Kaposi's sarcoma, squamous carcinoma, and lymphoma, all of which are more common in people with advanced HIV/AIDS. They present as ulcerated enlarging growths and are often complicated by pain, bleeding, unpleasant odour, and secondary infection.

Management

Non-pharmacological Symptom Management

Cleanse regularly with salt water.

Use ripe paw paw for sloughing. Crush and apply twice daily for 5 days (Hospice Africa Uganda, 2002).

or

Apply charcoal, live yoghurt, or honey to the wound.

Pharmacological Symptom Management

Treat topically with metronidazole, which:

Removes the smell

Dries up the discharge

Provides haemostasis

Clears the infection caused by anaerobic organisms.

Place crushed metronidazole tablets on the fungating area.

or

Insert metronidazole tablets or pessaries into the sinus or orifice leading to smelly growth.

The number of tablets depends on the size of the wound. Leave wound uncovered if possible (Hospice Africa Uganda, 2002).

or

Cleanse wound regularly with metronidazole solution (2 litres saline + 13 crushed 400 mg metronidazole tablets).

Apply dressings containing metronidazole.

Give metronidazole 200–400 mg
PO 3 times/day.

Skin Excoriation

Assessment

Excoriation, painful erosions due to friction and moisture, is usually found in the perianal and genital area (see Photo 9.15). It may be due to incontinence or chronic diarrhoea. Persistent moisture and friction may also be associated with eczema or candidiasis.

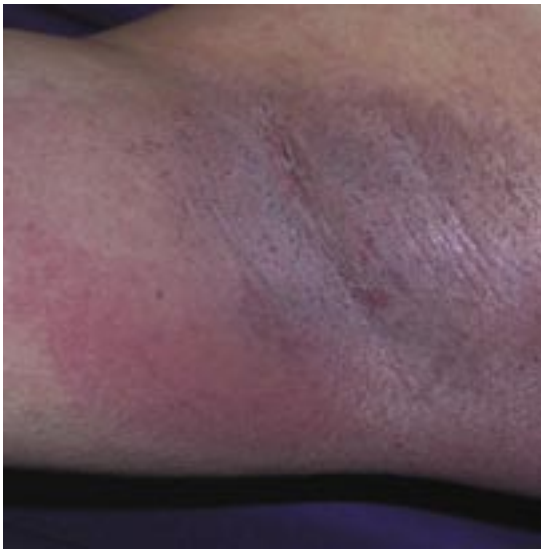


Photo 9.15 Excoriation in the axilla, following over zealous application of benzyl benzoate. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Pharmacological Symptom Management

Sooth painful excoriation by using a barrier cream, which can be applied more gently by thinning it down with a topical anaesthetic such as lidocaine gel — this helps relieve the pain as well.

Treat fungal infections accompanying excoriation with the same combination, but with the addition of antifungal creams such as miconazole.

Changes in Skin Colour

Assessment

People with HIV/AIDS are very prone to the development of photosensitive reactions (sometimes due to an adverse drug reaction), and this may lead to rapid and marked purplish hyperpigmentation or to complete loss of pigment in exposed areas. See Table 9.4: Changes in Skin Colour.

Blue discolouration of nails with longitudinal ridging appears to be a feature of HIV infection. Discolouration of nails (due to fungal infection) in the proximal part of the nail plate is suggestive of immunosuppression. Generalised redness and scaling may occur in people with severe eczema, in severe psoriasis, and in drug reactions. When skin colour changes, consider a possible drug reaction (see section on drug reactions), some of which can be life-threatening. For example, purple patches on the skin may be due to skin necrosis in toxic epidermal necrolysis.

Management

Because the causes of some skin colour changes are life-threatening, accurate assessment and immediate intervention is critical. See Table 9.4 for differential diagnosis and treatment as well as the following section on cutaneous drug reactions.

The **drug must be stopped if the drug reaction is severe** (blisters or ulcers, fever, systemic disturbance).

Table 9.4: Changes In Skin Colour

Colour/clinical	Diagnosis	Site/s	Likely Cause	Treatment
Purple; ↑ or ↓ pigmentation	Photosensitive drug reaction	Face, arms, neck	TB drug, thiazide	Stop drug Topical steroid Sun screen
Purple patches, plaques, nodules	Kaposi's sarcoma	Legs, arms, trunk, face, mouth	Human Herpes virus type 8 (HHV8)	See section on Kaposi's sarcoma
Purple and red areas; lips may be painful	Toxic epidermal necrolysis	Whole body, skin, and mucosae	Cotrimoxazole, TB drug, anticonvulsant, nevirapine, EFV	Stop drug See section on cutaneous drug reactions.
Purple-red patches with blisters	Fixed drug eruption	Anywhere on skin or mucosae	Laxatives, cotrimoxazole, analgesics	Avoid drug
Purple/blue nails	Blue nails of HIV	Nails	Unknown	None
Red, with scaling over whole body	Erythroderma (eczema, psoriasis, drug reaction)	Whole body	Anticonvulsant, cotrimoxazole, TB drug, allopurinol	Stop drug Topical steroid
Round red patches with central necrosis	Stevens-Johnson syndrome	Skin lesions anywhere, red eyes, erosions of mucosae	Cotrimoxazole, TB drug, anticonvulsant, analgesic	Stop drug See section on cutaneous drug reactions.
Red defined area with fever and pain	Cellulitis	Leg, face most common	<i>Streptococcus pyogenes</i>	Penicillin by injection

Cutaneous Drug Reactions

Assessment

Fixed drug eruption, Stevens-Johnson syndrome, (target-like lesions and mucosal ulcers) and toxic epidermal necrolysis (TEN) are all common drug reactions among people with HIV/AIDS.

In fixed drug eruption, round red-purple areas develop, may blister, then heal with purple pigmentation. Lesions flare up at the same site with every exposure to the particular drug.

In Stevens-Johnson syndrome, the patient has multiple red-purple lesions, many showing central skin necrosis (see Photo 9.16). The mouth, lips, eyes, and genital mucosae may be inflamed and ulcerated, causing severe pain.

In TEN, skin necrosis causes purple areas, and the skin may strip off in patches, leaving large eroded areas (see Photo 9.17).

TB drugs, antibiotics (in particular cotrimoxazole), anticonvulsants, and certain analgesics are usually to blame.

Patients on antiretroviral drugs can exhibit a range of skin reactions ranging from urticaria or vesicles to severe TEN. For minor reactions, use antihistamines and steroids. If severe, stop therapy until life-threatening reaction is over.



Photo 9.16 Stevens-Johnson syndrome. The lips become painful and eroded, often with bleeding. Other mucosal surfaces may also be involved. Photo courtesy Division of Dermatology, University of Cape Town.

Management

Stop the offending drug.

Severe drug reactions can be life-threatening and require immediate attention.

Reactions involving large eroded areas are life-threatening and require burn treatment. Apply soaks with water or normal saline and potassium permanganate. Wash the skin gently every day.

Provide eye care and mouth care.

Maintain fluid and electrolyte balance.

Encourage adequate oral fluids, including glucose and electrolytes.

Be vigilant to identify secondary bacterial infection.

Monitor liver and renal function.

Steroids are not indicated in treatment of Stevens-Johnson syndrome or TEN. Treat erythroderma (generalised redness and scaling) due to a drug reaction with a topical steroid.

Give patient written information on the suspected cause.

If available, consider the following:

Consult a dermatologist or admit to high care facility.

Order a medic-alert disc.



Photo 9.17 Toxic epidermal necrolysis in a woman. Note the purple discoloration and the separation of the necrotic epidermis. Photo courtesy Division of Dermatology, University of Cape Town.

References

- Hospice Africa Uganda. 2002. Palliative medicine pain and symptom control. In *The Cancer and/or AIDS Patient in Uganda and other African Countries: A book for health professionals*. Kampala: Hospice Africa Uganda.
- Tuthill J, Garnier S. 2003. Prevention of Skin Breakdown. In O'Neill JF, Selwyn PA, Schietinger H, eds. *A Clinical Guide to Supportive and Palliative Care for HIV/AIDS*. Rockville MD: Health Resources and Services Administration.
- WHO. 2004. Palliative Care: Symptom management and end-of-life care. Integrated Management of Adolescent and Adult Illness. Geneva: WHO.
- Wilson D, Naidoo S, Bekker LG, Cotton M, Maartens G, eds. 2002. *Handbook of HIV Medicine*. South Africa: Oxford University Press.

Suggested Resources

- Hartshorne ST. 2000. Common dermatological problems among HIV/AIDS patients. *CME: YOURSA Journal of CPD*. 18:321–326.
- Hospice Africa Uganda. 2002. Palliative medicine pain and symptom control. In *The Cancer and/or AIDS patient in Uganda and other African Countries: A book for health professionals*. Kampala, Uganda: Hospice Africa Uganda.
- Saxe N, Jessop S, Todd G. 1997. *Handbook of Dermatology for Primary Care*. South Africa: Oxford Press South Africa.
- Tschachler E, Bergstressor PR, Stingl G. 1996. HIV-related skin disease. *Lancet* 348:659–663.
- World Health Organisation. 1998. *Symptom Relief in Terminal Illness*. Geneva: WHO. ISBN 92 4 154507 0. Chapter 13: Skin problems, especially pages 88-98 on decubitus ulcers. Chapter 11: Mouth care. ISBN: 92 4 154507 0. Order through publications at <http://who.int/en>. Accessed 6/05.
- World Health Organisation. 1997. *Model Prescribing Information: Drugs Used in Skin Diseases*. Geneva: WHO. Order through publications at <http://who.int/en>. Accessed 6/05.