Common Skin Conditions in HIV

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Prevalence of Skin Disease

• Prevalence of skin diseases in outpatient clinics in developing world 20%
• In population studies in Africa, higher
  • 27% in Tanzania
  • 34% in Mali
  • 49% Tanzania

Anon Lancet 1991;337:1008-9
Mahe IJD 1998;37:673-6
Henderson IJD 1996;35:640-2
HIV and Skin

• Common 36-52%
• Prevalence rates 85% in SSA
• 37% present skin as marker of HIV
• 90% will develop skin problems during HIV
• CD4 count decreases, severity increases, multiple skin lesions, frequent relapses

Lowe Paed Infect Dis J 2010; 29(4):346-51
Int Jnl Dermatol 1990;29:24-29
Skin Disease

- Severity increases with decline in CD4
  - No immunosuppression 20%
  - Moderate 43%
  - Severe CDC 62%

- Common conditions: fungal and viral

Panya BMC Public health 2009,9:234,
Classification

• Infections

• Inflammatory

• Neoplasms

• HAART related
Spectrum at KEH VIII

• over a 1 yr period 246 adults HIV +ve
• mean age 32.9yrs, 19% > 1 dermatosis
• Herpes zoster 19%
• Seb dermatitis 18%
• PPE 8%
• T corporis 7%
• Kaposi’s Sa 7%

Morar IJD 2006; 45:1006-7
Spectrum in Nigeria (%)

- Seborrhoeic Eczema 50.0
- Papulopuritic itch 40.0
- Dermatophytosis 25.5
- Molluscum contagiosum 19.4
- Herpes Zoster 11.2
- Kaposi’s sarcoma 9.2
- HPV Infections 8.2

*Nnoruka IJD 2005,44:29-33*
Correlation with CD4

- 477 HIV +ve assessed in dermatology, 2004
- mean CD4: 433 cells/mm³
- dermatoses: 293
- CD4 < 50: 100% had dermatoses
- 50 – 200: 96.5%
- 200-500: 88.9%
- >500: 22.2%

Nnoruka IJD 2007,46 (Suppl 2) 14-18
Dermatoses and CD4

- < 50: Cryptococcosis; dermatophytosis, KS, warts, HSV
- 50-200: PPE (32%), Seb Eczema, Icthyosis, KS, dermatophytosis, candida, molluscum
- 200-500: Seb Eczema (43%), dermatophyte, Zoster, staph, syphilis
- > 500: Xerosis, Seb eczema, scabies

*Nnoruka IJD 2007,46 (Suppl 2) 14-18*
## Spectrum and CD4

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th>CD4</th>
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<tbody>
<tr>
<td>PPE</td>
<td>44.7</td>
<td>201</td>
</tr>
<tr>
<td>Seborrhoeic Eczema</td>
<td>35.8</td>
<td>453</td>
</tr>
<tr>
<td>Herpes zoster</td>
<td>27.6</td>
<td>381</td>
</tr>
<tr>
<td>Dermatophytosis</td>
<td>24.3</td>
<td>437</td>
</tr>
<tr>
<td>Oral candidiasis</td>
<td>22.6</td>
<td>139</td>
</tr>
<tr>
<td>Staph infection</td>
<td>20.5</td>
<td>413</td>
</tr>
<tr>
<td>&gt; 2 dermatoses associated with CD4 &lt; 200</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Nnoruka IJD 2007,46 (Suppl 2) 14-18*
Correlation with CD4

CD4 200 – 400 cells/mm³
- candida
- dermatophyte
- oral hairy leucoplakia
- varicella-zoster

CD4 < 200 cells/mm³
- CMV
- HSV
- atypical mycobacteria
- histoplasmosis
- Cryptococcosis
- Papular
Herpesvirus Infection

• Severe, chronic and recurrent in HIV infected children
• As CD4 count declines, lesions more atypical, episodes prolonged
• Early: recurrent painful ulcers
• Advanced: larger, necrotic, widespread
• CD4 > 400, 13% ulcerated lesions
• CD4 < 50, 58% ulcerated lesions

Herpesvirus Infection

• Commonest appearance HSV in children is orolabial disease
• Gingivostomatitis commonest
• Ulcers lips, tongue, palate, buccal mucosa
• Herpetic whitlow
• Perianal HSV
• Dissemination rare
Herpesvirus Infection

- Imp to differentiate recurrent ulcers from
- Chronic non-healing ulcers
- Herpetic ulcers > 1 month AIDS-defining
- Persistent viral shedding as immunsuppression declines
- Diagnosis:
  - Viral PCR, culture, Tzanck, DFA
Therapy

• Aciclovir effective
• < 2 yrs: for primary infection
  100mg 5 x dly or 200 tds for 10d
• >2 yrs: 200 5x dly x 10d; 400 tds x 10d
• Valaciclovir 500 bd
• Recurrence duration ↓ to 5 days
• Severe oral involvement IVI 5mg/kg 8 hourly
• Valaciclovir bioavailability 3-5X >er
Resistance

- Unresponsive ulcers, exclude CMV
- Suspect resistance, especially large ulcers
- Sensitivity proven
- IVI foscarnet 120-200mg/kg/d 2-3 doses
- Imiquimod
- Cidofovir
Scabies

- As in healthy children, web space burrows
- CD4 < 150 cells/mm$^3$, thick crusted psoriasiform plaques, red and yellow papules
- Face, scalp, nailfolds
- Superinfection $\rightarrow$ bacteraemia
Therapy

- Benzoyl benzoate
- Permethrin < 6 yrs
- Repeated applications required
- Debridement with keratolytics
- Crusted scabies ivermectin
- 200µg/kg in 2 doses 2 weeks apart
Molluscum contagiosum

- 5-18% HIV infected children
- Especially CD4 <200 cells/mm3
- Although common in children
- Atypical sites: face, neck
- Extensive, large, confluent, disfiguring
- Verrucous, pruritic and eczematous
- Recalcitrant and challenging to treat
Therapy

- No therapies convincingly effective
- 1st line salicylic/lactic acid prep cost effective
- Cautery/ cryo effective is surgical facilities available
- Profuse facial: 100% TCA effective
- Combination: CO2 laser, TCA, pulsed dye
- Less effective: tretinoin, imiquimod
- Scratching discouraged to prevent transmission and autoinoculation

Plane warts

- HIV infected children multiple HPV types
- persistent
- Common warts, flat warts, EDV-like lesions
- Zimbabwean study prev 24% in adolescents
- Extensive photodistribution
- marker of vertical transmission of HIV
- Risk of tumour development, surveillance
- No improvement with HAART

Lowe Paed Infect Dis J 2010; 29(4):346-51
Therapy

• 1st line salicylic acid/lactic acid preparations
  Duofilm
• tretinoin cost effective
• Genital warts podophyllin 20%
• Imiquimod effective in facial, genital and extragenital warts

Kojic  Curr Opin Oncol 2007 Sep; 19(5):464-9
Walzmann  Int J STD AIDS 2009 Sep; 20(9):657-8
Therapy

- If localised,
- Topical azoles
- If extensive,
- Griseofulvin 750 mg/d x 28 days or 20mg/kg
- Terbinafine 250 mg/d x 14 days
- Itraconazole 200 mg/d x 7 days
Seborrhoeic Dermatitis

- Commonest inflammatory dermatosis
- Incidence ranging 32 to 83 %
- Severity ↑ immunosuppression
- Infants erythema, scaling progresses to erythroderma
- >2ys flexural predominance
- Often superinfected staph and HSV
- Frequently relapses
Therapy

• Mild disease
• Topical steroids
  – 1% hydrocortisone for the face
  – methylprednisolone aceponate cream or dilute betamethasone valerate cream for the body
• Scalp
  – Ketoconazole
  – Zinc
  – Tar shampoos
Therapy

• If infected (weepy and malodorous):
  – systemic broad spectrum antibiotic
  – Potassium permanganate soaks
  – Sedating antihistamines
Papular Eruptions

• incidence varies greatly
• Recent study of adolescents in Zimbabwe commonest dermatosis 42%
• In contrast 4% and 5 % in India and Thailand
• Urticarial papules, excoriations, inflammatory pigmentation and prurigo
• Associated with CD4 < 200

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Therapy

- Symptomatic Rx limited to antihistamines, topical steroids
- Doxycycline 100 bd for 8-12 wks
- Flagyl 400 bd for 7 days
- 87% reduction linked to HAART Rx
- Recurrence associated with virologic failure

*Castelnuovo AIDS 2008;22:269-73*
Drug eruptions

- Increased 100 X in patients with HIV
- 75% due to antibiotics
  - TMP-SMX
  - sulfonamides
  - Penicillins especially amino-penicillins
- Commonest type maculopapular rash
- 95%
- Fine, erythematous truncal eruption spreads extremities
- 7-21 days after 1st exposure, 24-48 hrs if repeat exposure
- Resolves with drug withdrawal

*Carr, Lancet 2000 356:1423*
Drug eruptions

• Delayed up to 4-6 weeks
• Antituberculous and anticonvulsants
• Other offending agents,
  – Nevirapine
  – NVP rashes occur in 20%
  – 6-7 % significant
  – 1% SJS
Management

• May be self-limiting
• Topical steroids
• Antihistamines
• Monitor for danger signs:
  • Fever, blisters, lymphadenopathy, mucosal involvement, purpura
• Eosinophilia, hepatitis, agranulocytosis
IRIS

- Successful HAART, ↓VL, ↑CD4 and CD8
- Skin manifestations in 54-78%
- Commonest being:
  - HSV
  - VZV
  - Warts
  - Molluscum
Oral warts

- 0.5% prevalence in healthy population
- Increased to 5% in HIV
- 23% on HAART
- Cryotherapy, Co2 laser
- Cimetidine
- Imiquimod

Conclusion

• Skin conditions are an early warning of HIV/AIDS
• Increased frequency as HIV advances
• Unusual anatomical sites, clinical appearance, increased severity, treatment failure
• HAART has reduced the prevalence of muco-cutaneous disorders and improved QOL of patients with HIV/AIDS
• Continue to witness IRIS and adverse drug reactions