

## CHAPTER 8: DISEASES OF SKIN APPENDAGES

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### Hair and HIV

**Clinical presentations and epidemiology:** Roughly 7% of HIV-infected persons present with telogen effluvium presenting as diffuse alopecia. The other findings include lengthening of the eyelashes, fine texture and straightening in late-stage disease. The hair also breaks more easily.

**Aetiology and Treatment:** The mechanism is thought to be multifactorial including nutritional deficiency, as a result of scalp inflammatory disorders like seborrheic dermatitis and autoimmune apoptosis of stem cells in the hair follicle. Alopecia, involving the scalp, has been reported in patients with HIV infection treated with indinavir and lopinavir/ritonavir. The alopecia will generally reverse after substituting the offending drug(s).

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2. Kaplan MH, Sadick NS, Talmor M *J Am Acad Dermatol.* Acquired trichomegaly of the eyelashes: a cutaneous marker of acquired immunodeficiency syndrome. 1991; 25(5 Pt 1):801-4.
3. Chrysos G, Mikros S, Kokkoris S, Pastelli A, Kontochristopoulos G. Alopecia induced by lopinavir plus ritonavir therapy in an HIV patient. *J Drugs Dermatol.* 2007;6(7):742-3.



*Figure 96: Hair changes in HIV infection.*

## Nail Changes in HIV

Nail abnormalities are reported twice as often in HIV-infected persons compared to the normal population.

The most common nail abnormality in HIV is onychomycosis occurring in a third of patients. It often presents with uncommon forms, namely proximal or superficial onychomycosis. There is often co-infection with mold fungi or candida.

Melanonychia is the darkening of the finger and toe nails. In HIV-infected individuals, it is characterized by longitudinal hyper pigmented lines in the nails. The increase in nail pigmentation is caused by amplified pigment production by melanocytes due to activation of nail matrix melanocytes. Longitudinal melanonychia associated may be associated with treatment by zidovudine.

Other features that are significantly more common in HIV include transverse ridging, clubbing, splinter hemorrhages, absence of lunula, periungual erythema and proximal or total leukonychia.

### Treatment

Susceptibility to antifungal therapy is normal but onychomycosis in HIV-infected patients is more difficult to treat, probably as a result of co-infections. Thus, it is important to select a broad-spectrum antifungal therapy possibly for extended periods. There is no specific therapy for the other conditions except antiretroviral therapy.

### Further reading

1. Cribier B, Mena ML, Rey D et al. Nail changes in patients infected with human immunodeficiency virus. A prospective controlled study. *Arch Dermatol*. 1998;134(10):1216-20.
2. Graham SM, Dley HM, Ngwira B. Finger clubbing and HIV infection in Malawian children. *Lancet*. 1997; 349:31.
3. Moreno-Coutiño G, Arenas R, Reyes-Terán G. Improvement in onychomycosis after initiation of combined antiretroviral therapy. *Int J Dermatol*. 2013;52(3):311-3.
4. Gahalaut P, Mishra N, Chauhan S et al. Anolunula in fingernails among patients infected with HIV. *ISRN Dermatol*. 2014:271230. doi: 10.1155/2014/271230.
5. Ehsanzadeh-Cheemeh P, Grimes RM et al. Melanonychia in patients infected with Human Immunodeficiency Virus. *Advances in Infectious Diseases*, 2011, 1, 15-19. doi:10.4236/aid.2011.12002.





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*Figure 97a, b and c: Melanonychia*

## Digital Clubbing

Digital clubbing has been described in various pulmonary, cardiovascular, infectious, hepatobiliary and gastrointestinal diseases. It is characterized by bulbous enlargement of the distal phalanges due to an increase in soft tissue. Common causes of digital clubbing include cyanotic heart disease, neoplasms of the lungs, pulmonary tuberculosis, bronchiectasis, liver cirrhosis, and inflammatory bowel disease.

Its presence in concomitant HIV disease may be caused by lymphoid interstitial pneumonitis (LIP) or chronic lung disease.

### Further reading

1. Dever LL, Matta JS. Digital clubbing in HIV-infected patients: an observational study. *AIDS Patient Care STDS*. 2009;23 (1):19-22. doi: 10.1089/apc.2008.0102.