Dermatological Manifestations of HIV-infection and HIV-associated Kaposi’s Sarcoma

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HIV-infection is an important task for dermatologists, both for early diagnosis of the underlying infection and also for proper treatment of HIV-associated skin disease. From the dermatological point of view there are 4 stages of HIV-infection’s course, to be considered:

First, 2—3 weeks after inoculation with the virus a papular-versicular rash may appear, mostly localized on the trunk, sometimes resembling lues exanthema or pityriasis lichenoides et varioliformis acuta (PLEVA); it is often associated with fever, malaise, lymphadenopathy and mucosal lesions (“acute HIV-disease”).

After seroconversion takes place in ca. 6 weeks-6 months, a second, asymptomatic phase of the disease follows, which may last 1—2 or more years.

At the end of this phase, a third symptomatic phase begins, mostly with mucocutaneous symptomatology: opportunistic infections are indicating the upcoming reduction of immunosurveillance and defence, such as oral candidosis, multiple HPV-acenthamas, VZV-infection, pityrosporon folliculitis, proctitis, pyodermas, etc.. Together with wide spread recalcitrant seborrhoeic eczema, a papular pruritic folliculitis and hairy oral leucoplakia (OHL) have been described to represent HIV-associated dermatosis, also sterile eosinophilic pustulosis (first described by Ofuji) is seen more frequently in HIV-infected individuals.

Finally, the fourth stage of HIV-infections is characterized by life-threatening systemic opportunistic infections, usually involving the skin and its appendages and also the mucosa, such as mucocutaneous candidosis, atypical mucobacteriosis, sporotrichosis, histoplasmosis etc..

A most characteristic feature of full-blown AIDS is the appearance of various neoplasms, including Kaposi’s sarcoma (19—24% of the cases), Bcell lymphoma (ca. 5—7%) and also Hodgkin’s disease, CTCL, anogenital carcinoma a.o..

HIV-associated Kaposi’s sarcoma occurs nearly exclusively in homosexual young men, particularly in Europe, Middle East and the USA, whereas, it is rare in other populations, p.e. in South East Asia (Thailand), and extremely rare in females and HIV-infected hemophiliacs worldwide.

The tumor obviously derives from endothelial
cells and also pericytes of the cutaneous and mucosal microvasculature. KS-cells cultured by us in vitro expressed endothelial cell-like markers and immunophenotype. They were shown to be growth-inhibited by γIFN-alpha and γIFN-beta but not by γIFN-gamma. The tumor obviously represents a peculiar multifocal angioneoplasia, after an initial stage of inflammatory angioproliferation.

Treatment of HIV-infection with azidothymidine (AZT, Retrovir®) may show down viral multiplication and also the new drugs dideoxycytidine (DDC) and dideoxyinosine (DDI) have enriched our therapeutic spectrum. In a group of HIV-patients with KS treated by us (n=112) systemic application of γIFN-alpha (Roferon® A) together with antiretroviral therapy lead to complete and/or partial remissions of the tumor in ca. 35–40% of all patients over a follow-up period of 6 months at the average.
Fig. 1 Acute HIV-exanthema; seroconversion 6 weeks later

Fig. 2 Aphthous-like lesions and enanthema 3 weeks after HIV-infection

Fig. 3 Hairy oral leukoplakia in a HIV-infected young male (2 years after seroconversion)

Fig. 4 Wide-spread segmental zoster in early, otherwise asymptomatic HIV-disease
Fig. 5  Erosive candidosis of the penis in HIV-disease

Fig. 6  Therapy-refractory folliculitis in an immunosuppressed young homosexual male (<300 CD4+ lymphocytes)

Fig. 7  Disseminated Kaposi's sarcoma, HIV-associated

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Fig. 9 Acrolocalized, HIV-associated Kaposi's sarcoma

Fig. 10 Typical localization of mucocutaneous Kaposi's sarcoma in the hard palate

Fig. 11 Histological picture of a well demarcated nodule of Kaposi's sarcoma after drug-induced immunosuppression in a 53 years old male (HE-stain)

Fig. 12 Subepidermal rather diffuse angioproliferative infiltrate of HIV-associated Kaposi's sarcoma (HE-stain)
Fig. 13 Periproctal abscesses of atypical mycobacteriosis (M. kansasii) in a HIV-infected individual (AIDS)

Fig. 14 Highly pruritic clinical picture of HIV-associated eosinophilic folliculitis

Fig. 15 Cellular infiltrate with numerous eosinophils in the upper part of the follicle in HIV-associated folliculitis

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