Twenty Years Experience of HIV Care at a Dermato-venereology Clinic

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Since 1985 there has been a multidisciplinary HIV team at the department of Dermatology and Venereology at Sahlgrenska University Hospital. It all started with a clinic one night a week for gay-men in the early 80s. When HIV testing became possible in the end of 1984 the gay-clinic was well known among the gay community in our town and they choose to come there for HIV-testing. In these first two years, 63 patients were tested positive and a team was formed to take care of the HIV-positive patients. Ever since, we have had this HIV team at our department. We take care of all patients that are tested positive for HIV at our clinic and patients that are referred to us, regardless of way of transmission. The patients are under our care from the day they are tested positive to the day they die.

The majority of our patients are homosexual and bisexual men. In our town there is also a clinic for HIV-positive patients at the department of Infectious Diseases. Patients attending that clinic are mainly heterosexual patients who have moved to Sweden from high-endemic areas of the world.

In Sweden, HIV-positive patients are mainly taken care of by specialists of infectious diseases and there are only a few dermato-venereologists that are responsible for the total care of HIV-positive patients. I wish more doctors specialized in dermatology and venereology choose to work with HIV since it is a sexually transmitted disease and fits well in our specialty. Even those who do not take total care of HIV-positive patients need basic knowledge about HIV to be able to inform patients and to take care of skin complications.

I would like to share with you my experience as a dermato-venereologist and also to tell you about the HIV situation in the world today, hepatitis C, our experience and cohort of patients and finally about HIV care in the western world today.

HIV in the world today

HIV infection continues to rise globally. In 2003, the estimated numbers of adults and children newly infected with HIV was 5 million and living with HIV/AIDS 40 million. The areas where the most new infections are seen are the Sub-Sahara Africa and South and South-East Asia.

In Europe the estimated number of people living with HIV is about one million. The number of AIDS diagnoses in Europe shows the highest numbers in the southern part of Europe but the highest number of newly infected is in the Eastern Europe.

In the Nordic countries approximately 17000 people have been diagnosed with HIV. The exact number of people living with HIV in the Nordic countries is difficult to figure out, because of the different way of reporting the patients. In Denmark for instance, the reports of HIV-infected patients did not start until 1990. Another reason is the fact that patients move between countries.

Hepatitis C

Co-infection with hepatitis C is a growing problem. Chronic hepatitis C affects one third of HIV-positive persons worldwide, and the prevalence rises to >75% among i.v. drug users. In Europe 34% of the HIV positive patients have hepatitis C.

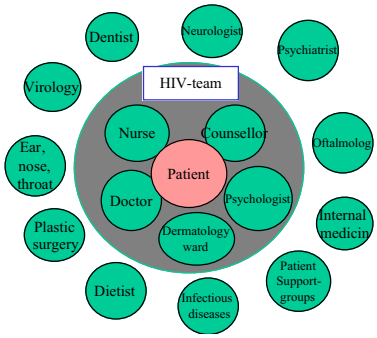

Fig 1. Teamwork with the HIV-positive patient in focus.

Progression to cirrhosis occurs faster among co-infected patients and hepatocarcinoma may appear at younger age in this population. Chronic hepatis C infection increases the risk of liver toxicity when patients use antiretroviral drugs.

Table I. *AIDS-defining events 1984-2004*

1984-1994 (62 events)	
• Kaposi's sarcoma	17
• Pneumocystis carinii infection	7
• Cytomegalus virus infection	7
• Candidiasis esophagitis	5
• Toxoplasmosis encephalitis	5
• Mycobacterium avium infection	4
• Lymphoma	3
• Progressive multifocal leukoencephalopathy	3
• Tuberculosis	3
• Cryptococcosis	2
• Wasting	2
• Candida esophagitis	1
• Salmonella septicaemia	1
• Bacterial pneumonia	1
• Isospora belli infection	1
1995-2004 (13 events)	
• Kaposi's sarcoma	3
• Cytomegalus virus infection	3
• Tuberculosis	2
• Encephalopathy	1
• Bacterial pneumonia	1

These are reasons why hepatitis C treatment should be prioritized among HIV-co-infected patients. However, these patients have lower response rate to hepatitis C therapy than those without HIV co-infection. The best candidates for anti-hepatitis C therapy are HIV-positive subjects with proven chronic hepatitis C (positive hepatitis C-RNA and elevated ALT), having CD4 counts >300 cells/ml and low plasma HIV-RNA (<10000 copies/ml), with or without antiretroviral therapy.

Guidelines for the management of chronic hepatitis C in the setting of HIV infection have recently been published.

Our experience

Our HIV team consists of two doctors, one nurse, two counsellors and one psychologist. During the years, we have built a network of different medical specialists that we contact depending on the current problem (Fig. 1). The work has changed dramatically during these 20 years. When we started there were hardly any antiretroviral drugs available and our main tasks were to deal with the psychological stress of having a death-threatening and contagious disease and to diagnose and treat opportunistic infections. In Table I the opportunistic infections we diagnosed are listed. The first ten years 62 AIDS defining events were diagnosed compared to thirteen in the last ten years. When proteas inhibitors became available in 1996 and we learned combination treatment, the work and prognosis changed dramatically. Today we have 19 different registered antiretroviral drugs, which are given in combinations of three different active agents. Highly active antiretroviral therapy (HAART) has significantly decreased the morbidity and mortality of HIV infection. However, significant constraints to therapeutic success still exist, which nowadays are the main issues in HIV care, including:

- *Toxicity*, the leading cause of discontinuation from treatment and the complications are often of such degree that medication is needed.
- *Resistance*, which can develop during therapy or be transmitted at the time of primary infection or re-infection.

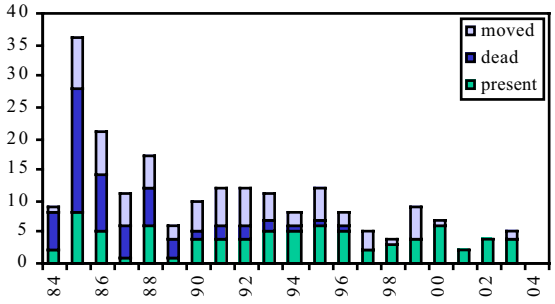

Fig. 2. Year for diagnose and current status (209 patients, 1984–2004).

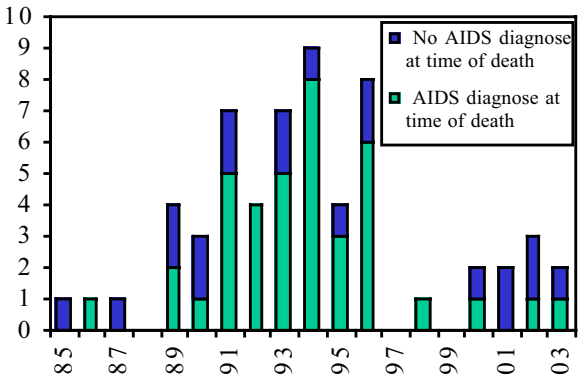

Fig. 3. Number of deaths among HIV-positive patients 1985–2004.

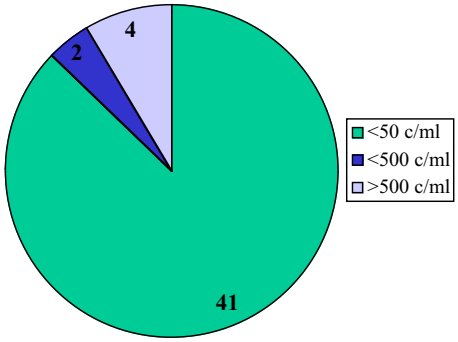

Fig. 4. HIV-RNA among patients with HAART

Our cohort

Since 1984, 209 HIV-positive patients have been treated at our clinic for shorter or longer periods (Fig. 2). The majority are homosexual men. The number of deaths decreased dramatically after 1996 when HAART became available (Fig. 3). The last years most deaths have not been due to AIDS. Today 81 patients are registered at our clinic. The overall CD4 status among the patients is very good; only 6 patients have CD4 count under 200 cells/mm^3. Forty-seven patients are receiving HAART. One way to measure the quality of the treatment is to look at the number of patients who have reached undetectable HIV-RNA (Fig. 4). Patients who do not reach undetectable HIV-RNA must be checked for poor adherence to prescribed drugs, development of resistance or pharmacokinetic effects reducing plasma levels.

Table II. *Major diagnostic considerations in skin.*

-KS
-Bacillary angiomatosis
-Herpes simplex, herpes zoster
-Adverse drug reactions
-Syphilis
-Seborrhoeic dermatitis
-Psoriasis, eczema
-Molluscum contagiosum
-Cryptococcus
-Histoplasmosis

HIV management

Severely symptomatic HIV-related disease is unusual at CD4 counts above 350 cells/mm^3.

In chronic HIV infection, however, skin symptoms often come earlier. Common skin diagnosis become often more severe and more difficult to treat (Table II). When patients represent with different symptoms from other organs there is a large number of diagnosis to consider especially when the CD4 count is less than 350 cells/mm^3 (Table III).

When to start treatment

In asymptomatic patients this decision should be driven primarily by the CD4 count. A value of 200 cells/mm^3 represents the minimum level at which treatment should be

Table III. *Major diagnostic considerations by organ system*

Lymphadenopaty: Syphilis, lymphoma, Kaposi's sarcoma, tuberculosis, mycobacterium avium infection
Eye: HIV-retinopathy, cytomegalus virus infection
Oral: Trush, oral hairy leukoplakia, herpes simplex virus, aptous ulcers, Kaposi's sarcoma
Eosophagus: Candida
Abdomen-diarrhoea: Salmonella, c. Diff., campylobacter, shigella, cryptosporidiosis, adverse drug reaction, microsporidia, mycobacterium avium infection, cytomegalus virus infection, AIDS enteropathy
Neurological: Neurosyphilis, cryptococcus, tuberculosis, HIV-dementia, lymphoma, progressive multifocal leukoencephalopathy, adverse drug reactions (neuropathy)
Abdomen-hepatomegaly: Hepatitis, adverse drug reaction, cytomegalus virus infection, mycobacterium avium infection, lactic acidosis, lymphoma, HIV, cryptosporidium
Splenomegaly: HIV, lymphoma, mycobacterium avium infection, histoplasmosis, cirrhosis
Lungs: Pneumocystis carinii infection, bacterial infections,tuberculosis, mycobacterium avium infection, Kaposi's sarcoma, cytomegalus virus infection, cryptococcus, histoplasmosis, lymphoma

advised. Treatment should be initiated when the CD4 count is between 200 and 350 cells/mm^3.

The exact timing should depend on individual factors such as symptoms, patient preference, likely adherence and potential toxicity. In this range, the rate of CD4 decline, viral load level and age provide additional information to the CD4 count on the short-term risk of progression. For patients with primary HIV infection, treatment is only recommended for the purpose of resolving severe symptoms.

What to start with

When choosing therapy, weight should be given to ease of adherence and minimisation of toxicity as well as to the likely pattern of resistance mutations emerging following treatment failure. Initial regimens should include two nucleoside analogue reverse transcriptase inhibitors (NRTIs) plus either a boosted protease inhibitor (PI) or a non-nucleoside reverse transcriptase inhibitor (NNRTI). Doctors, who do not have a good knowledge of the different available drugs; their resistance pattern, toxicity, pill burden, interactions, should not initiate treatment. How successful the treatment is depends a lot of the skill of the responsible doctor.

When to switch therapy for virological failure

In cases where tolerable treatment options are available these should be used as soon as virological rebound has been confirmed by two consecutive viral loads > 500 copies/ml. Before therapy is changed, factors other than resistance, such as poor adherence and pharmacokinetic effects reducing plasma levels of drugs to below optimum levels, need to be examined carefully in this group.

More specialists in dermatology and venereology in HIV care!

Finally I would like to point out some of the advantages I think we as specialists in dermatology and venereology have, which can contribute in the HIV care.

- Good knowledge of sexually transmitted diseases
- Familiarity to speak about sexual behaviour and transmission of sexual diseases
- Knowledge of the skin problems related to HIV
- Knowledge of how the drug reactions affects the skin and the body appearance

But above all, the most important thing to be a HIV doctor is not the basic training but rather a deep interest in this global life threatening disease. It is a challenging disease where our knowledge is in the beginning, the research is very intense and where potent and rather unknown drugs are used.

Further reading

Global HIV/AIDS statistics. www.unaids.com

Nordic HIV/AIDS statistics. www.netnordic.com

Guidelines for the management of chronic hepatitis C in the setting of HIV infection. International Panel. AIDS 2004; 18: 1–12.

Antiretriviral behandling av HIV-infektion, svenska behandlingsrekommendationer 2002. Information från läkemedelsverket. 2002; 5: 9–54. www.mpa.se

The British HIV Association guidelines for the treatment of HIV-infected adults with antiretroviral therapy. www.aidsmap.com

Bartlett J G. The Johns Hopkins Hospital 2003 Guide to Medical Care of Patients with HIV Infection, 11th edition, ≈±2003 Lippincot, Williams and Wilkins, Philadelphia, USA