Treating HIV Infection like a Sexually Transmitted Disease

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How can the spread of HIV infection and AIDS be most effectively prevented at the primary health care level? Dr Pallangyo from Tanzania argues that integration of AIDS initiatives within widespread STD prevention and control activities is now vital to any national programme.

AIDS is the most recent and deadly of the sexually transmitted diseases (STDs). Not only is sexual activity common to the spread of HIV and other STDs - some STDs may also facilitate the spread of HIV infection. The social and psychological similarities in the prevention and control of HIV infection and other STDs are numerous - both require intensive health education on sexual behaviour, and provoke debates on social attitudes, civil rights and public health.

What are the main aims of STD control programmes?
Firstly, to stop or interrupt transmission. This is where key similarities with AIDS prevention and control strategies exist. Early diagnosis of disease, followed by treatment and health education on methods of prevention, are crucial to interrupting the spread of STDs. Contact tracing (i.e. contacting past and/or present sexual partners for treatment and counselling) is also essential, as is more wide reaching publis health education on prevention.

Secondly, to prevent complications and their consequences. STDs should be treated as early as possible, to prevent serious long-term physical disabilities or death. For example, gonorrhoea can cause permanent infertility in men and women if not treated early enough and a baby born to a woman with gonorrhoea may develop an eye infection which can cause blindness. Syphilis can also be passed on to the unborn child, causing stillbirth or death soon after birth. Similarly, HIV infection and AIDS have implications for the unborn child. In adults, untreated syphilis progresses and can parmanently damage the heart and brain, and may eventually be fatal.

Unfortunately, it has been difficult or impossible to implement recommendations for STD control in most developing countries, often due to lack of diagnostic facilities, trained health workers-and, most important of all, a lack of political will. AIDS, however, has provoked an extraordinary degree of anxiety, interest and commitment from communities, governments and international bodies. Consequently, AIDS control programmes are being set up in many countries where STD control programmes are either poorly run, or non-existent.

Why are STD programmes important for AIDS prevention and control?
Many experts believe that to launch AIDS control initiatives without integrating them within brooder STD control programmes may well be ineffective and certainly uneconomical. The reasons for this are:

*STD treatment centres have direct contact with patients at high risk of acquiring HIV infection. All patients with symptoms of a common STD have in theory been at risk of acquiring HIV infection, since their sexual behaviour has already led to them getting a sexually transmitted diesease. The disease they caught could have been HIV infectionAIDS. Patients may continue to put themselves at risk, unless convinced otherwise through appropriate health education. This should be provided at all STD treatment centres as well as through public education campaigns.

In addition, studies have shown that HIV infected individuals are more likely to have a greater number of other STDs than individuals not infected with HIV. A person with HIV infection is likely to present with at least one other STD long before symptoms of AIDS develop (HIV infection has a longer incubation period than most other STDs) therefore providing an early opportunity for health education.

*Health workers already trained in STD management and control can offer some of the best expertise needed in an AIDS control programme. STD clinics often have extensive experience in providing specialised counselling on sexual behaviour and the use of condoms, for example.

*Since some STDs could actually facilitate the spread of HIV infection (see below), developing more extensive STD control programmes within primary health care could slow the current rapid spread of HIV in many parts of the world.

*Infection with STD activates the immune system, stimulating the replication of HIV in infected cells, which could speed up the progression to full-blown AIDS. Early treatment of STDS could therefore help prolong the life of an HIV-infected patient.

*Monitoring the occurence of STDs with short incubation periods - and those easier to diagnose than HIV-can provide useful indicators of the effectiveness, or infeectiveness, of AIDS control programmes and/or significant changes in sexual behaviour. The incidence of STDs in a given population reflects the degree of unsafe sexual behaviour and hence the risk of HIV transmission. For example, the reduction in the incidence of syphilis and gonorrhoea amongst the male homosexual community in the USA and Europe indicates widespread change in sexual behaviour.

Do STDs facilitate transmission of HIV?
There are strong theoretical reasons, as well as clinical evidence, to suggest that certain STDs are a potential risk factor in the transmission of HIV i.e. they might help the virus to pass from one infected person to their partner during sexual intercourse. It has been suggested that the high prevalence of some STDs reported in most urban centres in tropical Africa, could be a major factor contributing to the rapid spread of heterosexually acquired HIV in the region.

Several small-scale clinical studies have suggested that genital ulcer disease (GUD) in particular is a potential risk-factor in HIV

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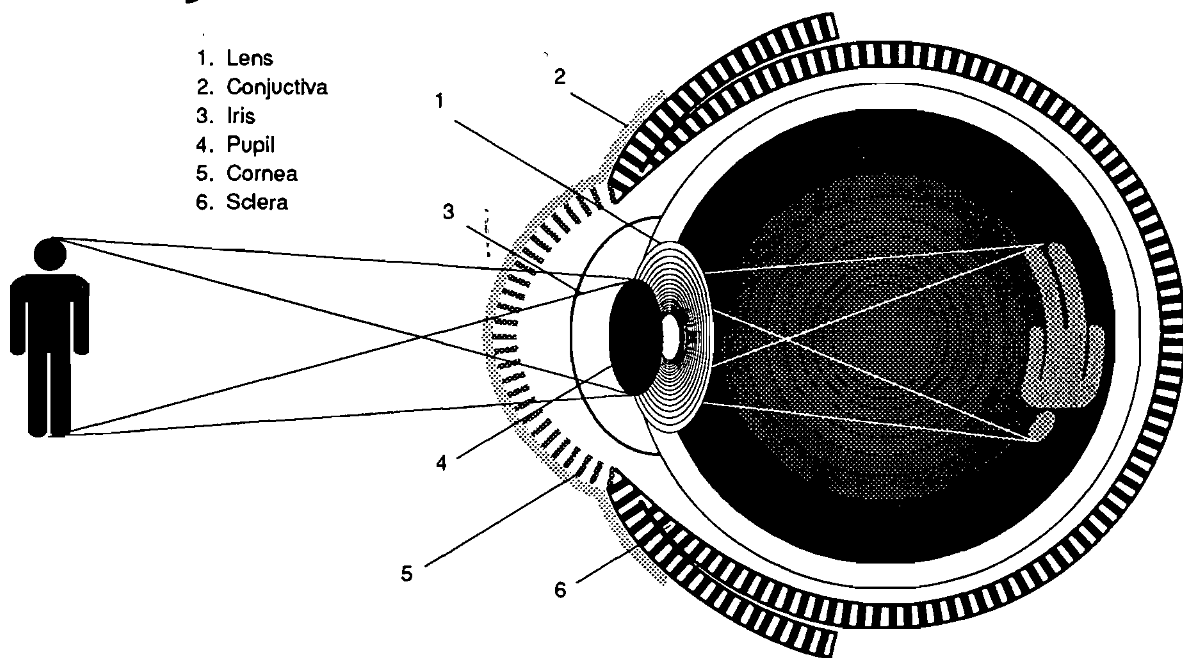

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transmission. GUD is a term which includes a number of ulcer-producing STDs, including chancroid, syphilis and herpes. At the STD clinic in Dar es Salaam, Tanzania, HIV seropositivity among patients presenting with GUD is currently four times that for all other patients attending STD clinics.

GUD could increase the risk of HIV transmission by increasing the infectivity of an HIV infected person (e.g. as a result of passage of HIV through the ulcer) and/or increasing the susceptibility of a person to HIV infection (e.g. by facilitating entry of the virus through genital ulcers, or through broken skin or mucous membranes).

Most STDs cause inflammation and/or genital ulceration of the skin or mucous membranes. Broken skin or mucous membranes allow easier entry or exit of HIV.

In addition, inflammed skin or mucous membranes and ulcers contain increased numbers of the cells that HIV attacks - the lymphocytes and macrophages which contain recptors for HIV attacks the body's defence system). Thus, any STD which increases the number of these cells in the genital area could facilitate the transmission of HIV.

Does HIV infection affect the clinical symptoms of other STDs?

Since HIV infection destroys the body's ability to fight other diseases, the clinical picture of common diseases in HIV infected individuals is often atypical and treatment may be more difficult. Many STD clinics in East and Central Africa are now having to cope with increasing numbers of HIV infected patients with GUD symptoms which persist for several weeks, some-times months, despite the provision of normal medical treatment. Chancroid ulcers in HIV infected patients, for example, tend to be larger, more numerous, and persist for longer than usual. Response to the recommended single oral dose of Trimethoprim sulphametrole (640mg/3200mg - i.e. eight standard tables each containing 80mg trimethoprim/400mg sulphametrole) is sometimes disappointing (note: this drug is not as widely available as co-trimoxazole - see following treatment guidelines).

Herpes simplex infections of the skin and/or mucous membranes are common in patients with AIDS and can cause severe genital, peri-anal and rectal ulcers. Extensive genital ulceration due to Herpes Simplex Virus type 2, may be the first indication of underlying immunodeficiency (damage to the immune system caused by AIDS).

In HIV infected patients, it also appears that late syphilis may develop within an unusually short period of time (less than five years) after initial infection with Treponema pallidum (the bacterium which causes syphilis). However, most HIV infected patients with early syphilis respond well to doses of Benzathine benzyl penicillin G (2,4 million units).

Genital viral warts, candidosis and trichomoniasis are also STDs more commonly found in HIV infected patients in Dar es Salaam; symptoms tend to be more serious in patients suffering from immunodeficiency.

There is certainly sufficient evidence to suggest that HIV infection may alter both the clinical presentation and the natural history of STDs, and that some STDs may facilitate the spread of HIV and affect the clinical picture of AIDS. Strengthened STD programmes are urgently needed: in Tanzania, for example, reports to the Ministry of Heath between 1973 and 1978 showed gonorrhoea to be the ninth most frequent cause of hospical out-patient attendance in the country.

Since HIV infection/AIDS is predominantly an STD, it should be treated as such in integrated prevention and control strategies. Attempts to control the spread of HIV in the absence of STD prevention and control activities are less likely to succeed.

The fatal tendency of mankind to live off thinking about a thing when it is no longer doubtful, is the cause of half their errors. A contemporary author has well spoken of " the deep slumber of a decided opinion"

- John Stuart Mill

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