The problem of HIV and AIDS in India

Shiv Lal and B. B. Thakur

National AIDS Control Organization, Ministry of Health and Family Welfare, IRCS Building, 1 Red Cross Road, New Delhi 110 001, India

ALTHOUGH the AIDS pandemic is in its early stages in Asia, the virus is spreading rapidly among high-risk groups and is making fast inroads into the general population. Estimates suggest that more than one million people are infected with HIV in India[1].

India is a large country in terms of area and population, so the epidemic's spread and impact have not been homogenous . There are many regional and population group variations, which probably reflect separate epidemics with their own starting points and probably involve different types and frequencies of risky behaviours and practices, such as having multiple sex partners or sharing drug injection equipment.

The situation in India

HIV was first detected in India in 1986 when pilot HIV surveillance activities were carried out among selected populations and in various locations to ascertain if the virus was present in the country. Within six or seven years, it became evident that HIV infection was present in almost all parts of the country, but was worst in the states of Maharashtra, Tamil Nadu and northeastern States of Manipur, Mizoram and Nagaland. In the latter three states, which border Myanmar, the main mode of HIV transmission is through needle sharing by injecting drug users[2], whereas in the rest of the country, most infections are transmitted through heterosexuals[3]. The number of AIDS cases reported from all parts of the country is increasing.

AIDS cases

In 1986, Bombay reported India's first AIDS case. Since then, as of 31 January 1995, a total of 1032 AIDS cases have been reported to the National AIDS Control Organization from the states and union territories as shown in Table 1 (ref. 4).

As is true elsewhere, the number of reported cases in India represents a small fraction of actual AIDS morbidity. This gap between actual and reported cases is caused by both underreporting and misdiagnosis; as the medical community's awareness and training improve, the gap is likely to shrink. According to estimates based on HIV prevalence, the actual number of AIDS cases in India is probably between 10,000 and 20,000 (ref. 5). However, the number of AIDS cases in the country cannot be taken as indicative of the current HIV and AIDS problem because the number of current AIDS cases reflects the HIV situation that prevailed five to ten years ago.

Table 1. National AIDS Control Programme, India, AIDS cases in India (Reported to NACO, as of 31 January 1995)

S. No.	State/Union Territory	AIDS cases
1.	Andhra Pradesh	1
2.	Assam	2
3.	Delhi	68
4.	Goa	12
5.	Gujarat	18
6.	Haryana	1
7.	Himachal Pradesh	9
8.	Jammu & Kashmir	2
9.	Kerala	76
10.	Madhya Pradesh	21
11.	Maharashtra	288
12.	Manipur	68
13.	Pondicherry	6
14.	Punjab/Chandigarh	47
15.	Rajasthan	1
16.	Tamil Nadu	345
17.	Uttar Pradesh	8
18.	West Bengal	30
19.	Karnataka	26
20.	Dadar Nagar & Haveli	1
21.	Orissa	2
	Total	1032

HIV infection

From October 1985 until the end of January 1995, about 2,443,141 individuals had been tested for HIV through the nationwide surveillance, of whom 17,283 tested positive for HIV (ref. 4). HIV prevalence increased from 2.5

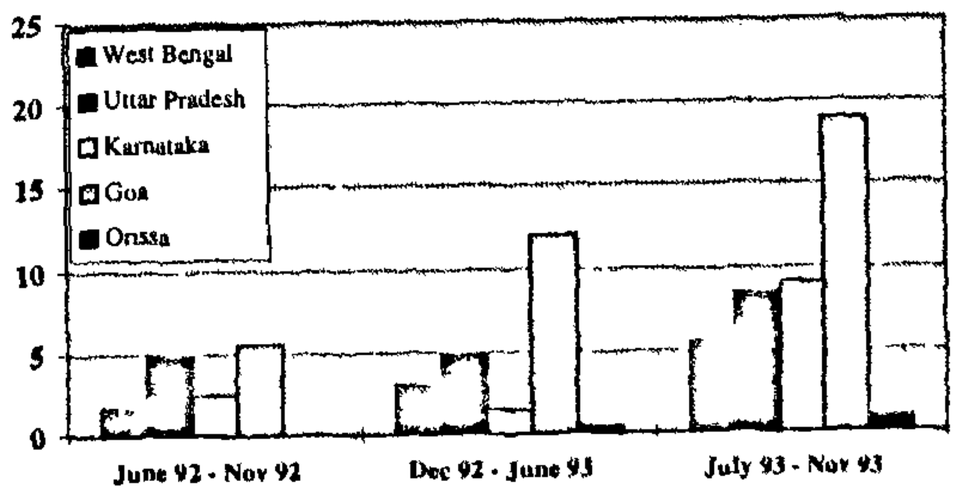

Figure 1. Prevalence of HIV infection in selected states (June 92–November 1993).

per 1000 population in 1986 to 11.2 per 1000 by 1992. The course of the epidemic has been quite varied in nature, as is reflected clearly by Figure 1. Most of this testing has been done on population groups perceived to be at high risk for HIV infection; this may influence the results. The data available to date indicate not only that the infection is present in all regions but also that it has spread well beyond the high-risk groups to the general population.

The HIV prevalence rate varies widely in different areas and among different population groups. The major concentration of infection remains in the city of Bombay, where HIV prevalence among prostitutes has risen significantly, from 10% in 1986 to 51% in 1993. The other known centres of HIV infection are Madras, Madurai, Pune, Vellore and the surrounding areas. In Vellore, the HIV rate among prostitutes increased from 0.5% in 1986 to 34.5% in 1990. The latest sentinel surveillance data (1993) from Madurai and Madras showed that the prevalence of HIV infection among attendees at clinics for sexually transmitted diseases is 6.5% and 2.7%, respectively. Other studies have shown that HIV prevalence among injecting drug users increased from some 45% in the first half of 1992 to 73% in the first half of 1993.

The increasing trends of HIV infection among the high-risk groups have been followed closely by the rising trends among the general population. The sentinel surveys done among pregnant women in Bombay, Salem and Manipur have found the prevalence of HIV to be 2.5%, 1.1% and 0.8%, respectively (Figure 2). The prevalence among pregnant women in Tirupati rose from 0.5% in 1990 to 2.0% in 1993. Such trends demonstrate the spread of HIV infection in the general population.

The trends in HIV prevalence rates among high-risk groups in India seem to be comparable to trends previously observed in some African nations among prostitutes. This similarity suggests that the epidemic could spread to the general population to alarming levels, as happened in these countries, where the spread of HIV among the general population seems to have been preceded by a sharp increase in HIV prevalence among high-risk groups.

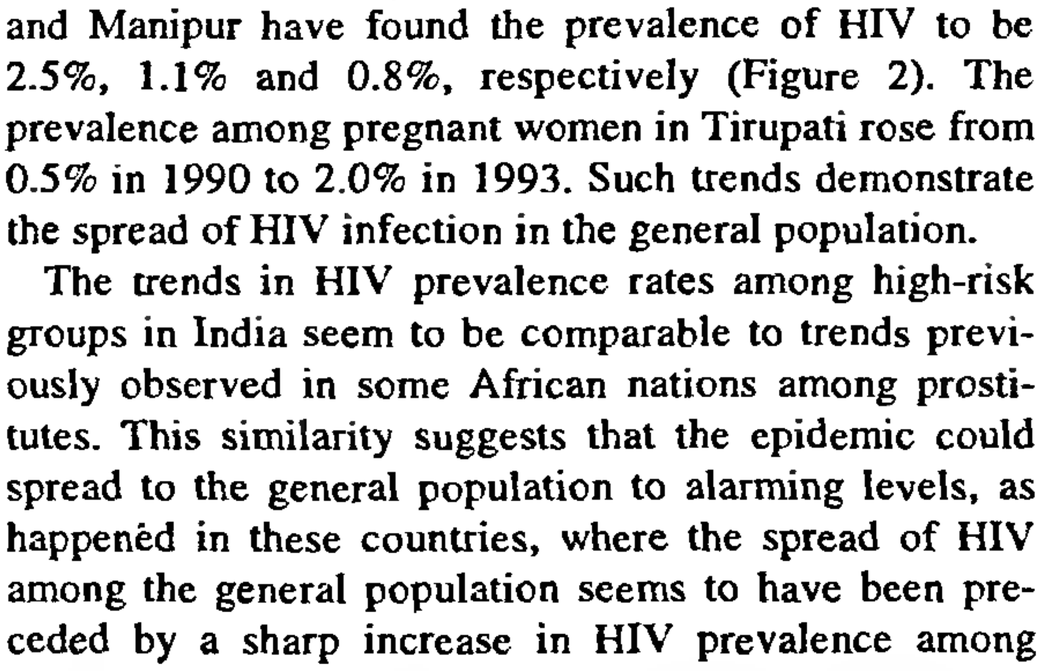

Figure 2. HIV positivity among pregnant women (1st round-sentinel surveillance.

Clearly, HIV infection is not restricted to such marginalized groups as prostitutes and drug addicts, but is spreading to more areas and to the general population in those areas through heterosexual transmission. Nevertheless, not all regions are being affected to the same extent. The apparent geographical clustering at this stage of the epidemic may be caused by differences in the proportion of the population engaging in high-risk behaviour or by unevenness in the surveillance system. Whatever the local pattern, however, the surveillance data taken as a whole demand that there be implementation of a comprehensive AIDS control programme as soon as possible.

Other issues

In India the prevalence of tuberculosis infection is 40% as evinced by tuberculosis testing. Of reported AIDS cases, 56% had tuberculosis of one or more organs. Thus, given this high prevalence of tuberculosis among those with AIDS, India is going to face the added problem of an increase in cases of tuberculosis even among those not suffering from AIDS.

Conclusion

Poverty and underdevelopment are key factors that contribute to the AIDS pandemic: financial difficulties and economic problems force men to leave their families to find work, encourage drug use and make prostitution a survival strategy[6]. If we take these factors into account, India has great reason to be alarmed. India recognizes this threat clearly. Accordingly, India has launched a comprehensive, nationwide AIDS control programme since 1992 with financial assistance from the World Bank and technical input from the World Health Organization. This programme consists of different components, namely: surveillance for HIV/AIDS; control of sexually transmitted diseases; condom distribution programmes; and information, education and communication designed to generate awareness of the disease and encourage change in risky behaviours. Further, the programme aims at providing comprehensive, nonstigmatizing care to all those who are already suffering from AIDS.

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5. Lal, S., Khodekovich, L. and Sengupta, D., AIDS case surveillance, *J. Med. Assoc.*, 1994, **92**, 55–56.
6. Richard, H., A global agenda for AIDS, *Lancet*, 1993, **341**, 234