Short communication

HIGH PREVALENCE OF SEXUALLY TRANSMITTED DISEASES IN AN AREA IN MOZAMBIQUE

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Each year 10 million Japanese travelers and workers visit various foreign countries, including Asia and Africa. Sexually transmitted diseases (STD)s are now more common in many developing countries than in the developed nations (De Schamphellerie *et al.*, 1990; Mosha *et al.*, 1993; Nkowane, 1991). Evidence indicates that the classic STDs facilitate the transmission of human immunodeficiency virus (HIV) infection (Pepin *et al.*, 1989). Particularly compelling is the need to prevent fetal death, prematurity, and neonatal complications by STDs, especially in developing countries (Schulz *et al.*, 1987).

Whereas many studies have been conducted on the prevalence of STDs in urban populations of developing countries, data are sparse on their prevalence in rural areas, there is little reliable information on the risk of STDs especially in the developing countries. This is because most studies on the prevalence of STDs have been conducted in selected populations, such as in-patients or outpatients being administered medical

treatment for the infection. The true prevalence of STDs can be derived only from data on unselected populations.

Our objective was to investigate the incidence of STDs in people in rural areas of in Mozambique and to identify factors involved in the dissemination of the infections.

We conducted our investigation in an area around Quelimane in Mozambique in 1991 and 1994. Blood samples were taken from 88 people, 59 males (average age; 32.01 ± 11.65 , range; 12-60) and 29 females (average age; 22.61 ± 8.25 , range; 11-42) in 1991, and from 38 males (average age; 29.03 ± 8.03 , range; 18-52) in 1994. All subjects were socially active and believed themselves to be healthy. Laboratory tests of serum were conducted by a commercial laboratory, BML co. in Tokyo. The methods used were reversed passive hemagglutination (RPHA) for hepatitis B surface antigen and passive hemagglutination (PHA) for hepatitis B surface antibodies, Glass plate tests, agglutinin,

Table 1a Subjects testing positive for STDs in 1991

	STS	TPHA	FTA-ABS*	Syphilis†	HIV‡	HBsAg	HBsAb	Subjects
Male	8	8	4/5	6	1	3	15	59
Female	4	4	0/1	3	1	3	7	29

Table 1b Subjects testing positive for STDs in 1994

	STS	TPHA	FTA-ABS*	Syphilis†	HIV‡	HBsAg	HBsAb	Chlamydia	Subjects
Male	16	17	3/7	14	1	3	12	22	38

* ; Ratio of positive tests to number of people tested

† ; Serologically diagnosed syphilis:

Either findings: 1) STS (+) and TPHA (+)

2) STS (+) and TPHA (-) and FTA-ABS (+)

‡ ; Afterward there was no remnant serum that was positive for HIV-2 using ORTHO HIVCHEK™ System 3 and Labblot-2.

Table 2a Number of serologically proven STDs among subjects tested in 1991: HBV, syphilis and HIV

	None	Single	Double	Triple	Subjects
Male	36	19	3	1	59
Female	17	11	1	0	29

Table 2b Number of serologically proven STDs among subjects tested in 1994: HBV, *Treponema pallidum*, HIV and *Chlamydia trachomatis*

	None	Single	Double	Triple	Subjects
Male	7	12	13	6	38

treponema pallidum hemagglutination (TPHA) and fluorescent treponema antibody absorption (FTA-ABS) for syphilis, enzyme-linked immunosorbent assay (ELISA) (HTLV-3EIA, Dainabbot) and western blot (Lablot-1, Fuji-Rebio) for HIV-1, and fluorescent antibody for IgG against *Chlamydia trachomatis*.

As shown in Table 1a, in 1991, we found no significant difference between the male and female subjects in incidence of STDs. Nine of the 88 subjects (10.2%) were serologically diagnosed with syphilis; two (one male and one female) were HIV carriers; and 28 were infected with hepatitis B virus (HBV). As shown in Table 2a, 35 subjects (39.7%) had at least one of the STDs we tested for.

In 1994, 14 of 38 subjects were serologically diagnosed with syphilis; one was an HIV carrier; 15 were infected with HBV; and 22 were infected with *trachomatis*: (Table 1b). A total of 31 (81.6%) either had STDs or a history of STDs and half of the 38 people tested in 1994 had a history of two or three different STDs (Table 2b).

These findings suggest a high prevalence of STDs in the general population of Quelimane. According to Lijstrand *et al* (Lijstrand *et al.*, 1990) the prevalence of active syphilis in pregnant women in six of the country's 10 provinces ranged from 1.6% (Muiane, community-based survey) to 9.8% (Maputo, suburban antenatal care unit). Possible explanations for the high prevalence of STDs we found include the collapse of health services during the civil war and changing due to the customs in rural areas.

The incidence of chlamydial infection in Quelimane was higher than the reported global incidence (De Schryver and Meheus, 1990). We consider this result to be due in part to the difference in the test methods

employed test methods. We found a higher prevalence of STDs in 1994 than in 1991. This difference may result from the number of tested cases 30 out of 38 in 1994 and 11 out of 88 in 1991, respectively, since public health services who reduced in the rural villages.

We could get little informations on STD symptoms from interviews with the subjects. Thus, the near-total absence of reported symptoms in these cases precludes a screening program for STDs based on symptoms alone.

Vuylsteke *et al* (Vuylsteke *et al.*, 1993) have reported a high prevalence of *Haemophilus ducreyi* antibodies in the Mozambican population. We did not have the proper assay system to test for this classic venereal disease.

As mixed infections are common, syphilis and chlamydia screening for every STD patient should be instituted. Mozambique in the 1990's appears to be facing problems associated with syphilis and other STDs similar in severity and magnitude to those faced by the western world in the early 1900's (De Schryver and Meheus, 1990). We also need to be concerned about other non-tested STDs.

The low prevalence of HIV infection contrasts with the prevalence of the other STDs. Only two males and one female (2.4%) were confirmed as HIV-positive. Because of the civil war, Mozambique has been relatively isolated from neighbouring countries such as Malawi, Tanzania, and Zambia, all of which have a high prevalence of HIV infection. However, the high prevalences of STDs that we found suggests that circumstances in Mozambique are favourable for an explosive HIV epidemic, especially now that the civil war has ended and the roads are again open.

In conclusion, because of the very high rates of STD in Mozambique and the great potential for the spread of HIV infection, STD control and management must assume top priority. Case management at the primary health care level provides an opportunity to educate people about their high-risk behaviour. Although the acquired immune deficiency syndrome, human papillomavirus infection, and other newly identified STDs, are attracting much attention in Japan, we must remain vigilant for the serious sequelae of syphilis and gonorrhoea, especially in areas where these classic STDs remain uncontrolled.

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