ORIGINAL ARTICLE

Demographic Characteristics and Prevalence of Other Sexually Transmitted Diseases in HIV-Positive Patients Seen in the Dermatology Cum Genitourinary Clinic, Hospital Sultanah Aminah, Johor Bahru

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Summary

The demographic characteristics, risk behaviour and prevalence of other sexually transmitted diseases (STDs) were determined in 132 HIV-infected individuals seen in a Dermatology cum Genitourinary Clinic, Hospital Sultanah Aminah Johor Bahru. Sixty-one (46.2%) were Malays, 37.9% Chinese, 10.6% Indians and 5.3% were of other ethnic groups. The male to female ratio was 4.5:1. Most of the patients (82.5%) were between 20 to 40 years-old. Seventy (53.0%) were single, 34.1% were married and 7.5% were divorcees. The majority of them (97.7%) were heterosexual. Fifty seven (53.3%) of our male patients patronised commercial workers. Eighty-one (61.8%) were not intravenous drug users (IVDU). Of the 50 IVDUs, 24 had multiple sexual exposures. Fifty-three (48.2%) of the 109 patients screened for STDs had one or more other STDs. Thirty-four patients (31.9%) reported one STD in the past and 3.6% reported two STDs in the past. Fifty-six patients (42.4%) had developed AIDS. Thirteen had passed away.

The main mode of transmission of HIV infection in this population is through heterosexual intercourse and the prevalence of STDs is high. These findings indicate a need to advocate responsible sexual behaviour and to detect as well as treat STDs early to prevent the sexual transmission of HIV.

Key Words: Demographic characteristics, Risk behaviour, HIV, STDs

Introduction

As of June 1998, the total number of patients with human immunodeficiency virus (HIV) infections reported to the Ministry of Health, Malaysia was 26,178[1]. Seventy-six percent of these patients were intravenous drug users (IVDUs). Only 9% of all reported cases were attributed to sexual transmission.

The disproportionately high percentage of IVDUs living with HIV was due to compulsory screening of all IVDUs under detention in Malaysia. It is estimated that 10 - 15% of our IVDUs are HIV-positive[2]. Unfortunately, the sexual behavioural risks of these HIV-positive IVDUs were not determined although it is well known that IVDUs exchange sexual favours for drugs or money to buy drugs[3-6]. The

prevalence of other sexually transmitted diseases (STDs) which is indicative of unsafe sex practices is also not known in these patients.

Currently, sexual transmission accounts for about 80% of HIV infection worldwide. Many epidemiological studies also suggest an association between HIV infection and past or present infection with other STDs[7-11].

The objective of this study was to determine the demographic characteristics of HIV patients seen in our clinic, their risk behaviour and the prevalence of other STDs.

Materials and Methods

The Dermatology cum Genitourinary Clinic at Hospital Sultanah Aminah, Johor Bahru has an average of 12 000 clinic attendees per year with a racial composition of 56% Malay, 26% Chinese, 14% Indian and 4% of other ethnic groups. About 4% of these patients are seen for STDs annually.

Since 1992, all patients presenting with STDs and patients requesting for STD screening were clerked by using standard forms which record demographic characteristics, risk profile and self-reported history of past STDs and condom use.

All patients were also offered the following screening tests:

- Urethral swab for gonorrhoea
- Endocervical swab for gonorrhoea in women
- 2-glass urine tests and urethral swab for pus cells in men to diagnose non-specific urethritis (NSU)
- Vaginal swabs for trichomonas vaginalis and candida species
- Cervical cytology (pap smear) for women
- VDRL and TPHA
- HIV antibody (ELISA)

A HIV registry was also started in 1992 to monitor the trend of infection in our clinic. All HIV infections were confirmed with Western Blot analysis after repeating the initial positive ELISA antibody tests. This study was done by analysing individual patient record forms and the HIV registry. Present STDs were all STDs detected on presentation and past STDs were mainly self-reported, some of which were confirmed by previous case records.

Results

A total of 132 patients infected with HIV were managed in our clinic from 1992 to June 1998. Figures 1 - 4 show the demographic characteristics of these patients. The majority of our HIV patients were Malay (46.2%), fifty (37.9%) were Chinese, 14 (10.6%) Indian and 7 (5.3%)

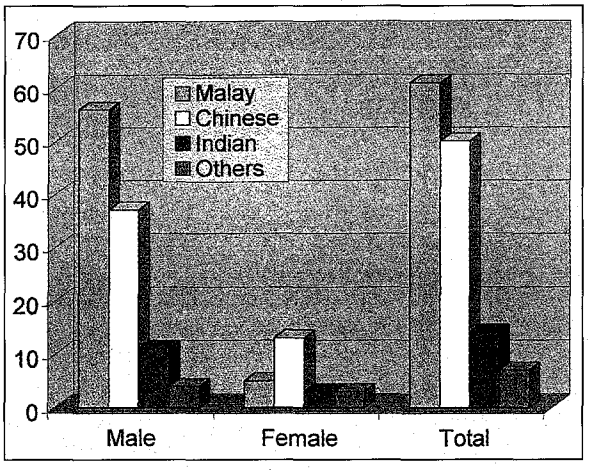

Fig. 1: Ethnic distribution of patients.

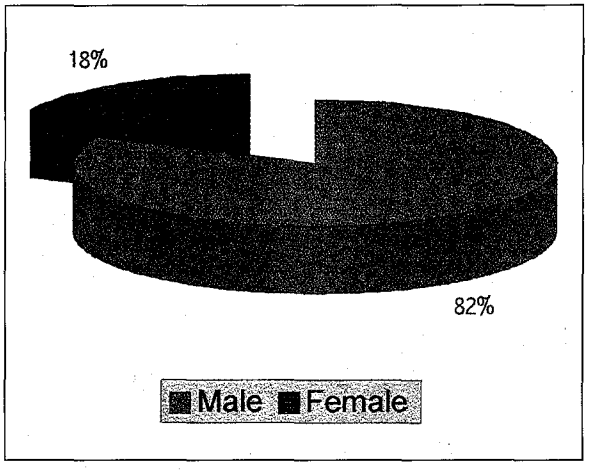

Fig. 2: Distribution of patients by sex.

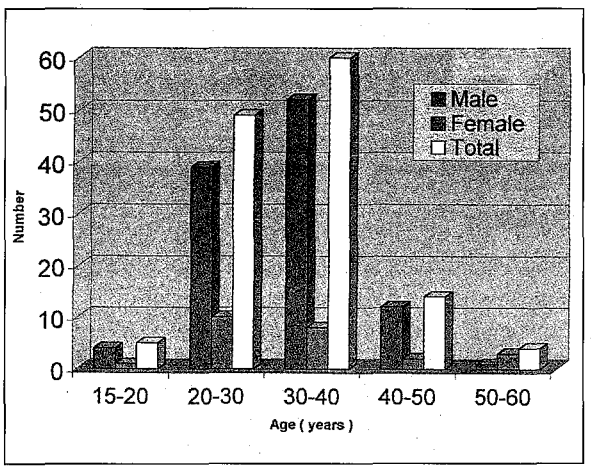

Fig. 3: Demographic characteristics by age and sex.

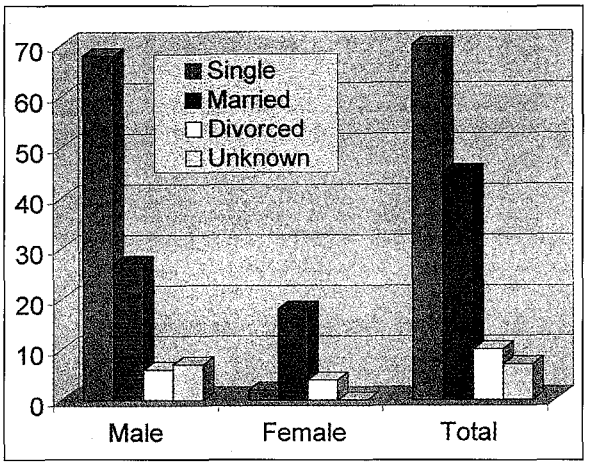

Fig. 4: Marital status of patients.

were of other ethnic groups. Of these, 4 were Indonesians, 2 were Thai nationals and 1 Iban. Although the majority of our HIV patients were Malay, Malay women made up only 20% of the 24 HIV-positive women. Thirteen (54%) of our HIV-positive women were Chinese (Fig.1). The overall male:female ratio was 4.5:1, with a Malay male:female ratio of 11.2:1, a Chinese male: female ratio of 2.8:1 and an Indian male:female ratio of 3.6:1 (Fig.2). Eighty-three percent of our patients were between 20 and 40 years of age (Fig.3). Most of our male patients were single whereas the majority of our female patients were married (Fig.4). Most of our patients were in full-time employment (Table I), 12 were unemployed, 16 were prisoners, 13 were in drug rehabilitation centres and 8 were housewives. Of the 9 drivers, 5 were taxi drivers, 3 were long distance lorry drivers and one a van driver.

Table II shows the risk profile of our patients. The majority of them (97.7%) were heterosexual. Sexual contact was the main risk behaviour for acquiring HIV. Only 50 (38.1%) were injecting drug users. Twenty-four (48%) of these IVDUs had multiple sexual exposures. One patient had no known risk behaviour. Fifty-seven (53.3%) of our male patients patronised sex workers. Twenty-two (16.7%) had sex abroad. Most (96%) of our patients did not use condoms.

Seventy-two were known HIV patients who were seen in our clinic for symptomatic STDs or skin disorders. Only 109 patients (86 males and 23 females) were screened for STDs because of various factors which included unacceptability of tests to patients and patients defaulting follow-up before STD screening. Table III indicates the prevalence of present and past STDs in our

Table I
Occupation of Patients

	Number of Patients		
Employed		**Unemployed**	
Driver	9	Prisoners	16
Factory worker	7	Inmate of drug	
Labourer	7	rehabilitation centres	13
Businessman	5	Unemployed	12
Hotel staff	5	Housewives	8
Electrician	4		
Sex worker	3		
Hairdresser	3		
Painter	3		
Shop assistant	3		
Fisherman	2		
Sailor	2		
Farmer	2		
Others (one each)	20		
Unrecorded	8		
Total	83		49

Table II
Risk Profile of Patients

Risk for HIV	Number	Percentage
Sexual transmission	81	61.8
IVDU	26	19.8
Sexual transmission & IVDU	24	18.3
Undetermined	1	0.1
Total	132	100
Sexual Orientation	**Number**	**%**
Heterosexual	125	97.7
Homosexual	1	0.8
Bisexual	2	1.5
Total	128	100
Not Recorded	4	3.0
Condom Use	**Number**	**Percentage**
Yes	4	3.5
No	109	96.5
Not Recorded	19	14.3

Table III
Prevalence of Other STDs

	Present STD Detected/ Screened	Past STD (total 109) %	Number	%
Syphilis	27/109	24.7	11	10.9
Gonorhoea	8/109	7.4	19	17.3
Herpes genitalis	7/109	6.2	4	3.7
Non-specific urethritis	5/109	4.9	1	0.1
Genital warts	2/109	1.3	3	2.5
Genital scabies	4/109	3.7	0	0
Vaginal candidiasis	6/23	26.9	0	0

patients. Syphilis was the commonest STD found in our HIV patients. Of the 109 patients screened for STDs, 24.7% had syphilis, 7.4% had gonorrhoea and 6.2% had herpes genitalis. Of the 27 patients with syphilis, eighteen presented with either symptomatic syphilis or a positive serological test for syphilis. The remaining nine cases were newly detected latent syphilis. All the 8 patients with gonorrhoea were symptomatic and no cases of gonorrhoea were detected on routine screening. Two patients presented with non-specific urethritis and 3 more new cases were detected on investigation. Four patients presented with herpes genitalis and 3 more cases were found on clinical examination. One patient presented with genital warts and another case was detected on routine examination. Three out of the 4 patients with genital scabies presented with genital lesions and were found to be HIV positive. Six patients had vaginal candidiasis. One patient had cervical intraepithelial neoplasia I. Three patients had two other STDs; syphilis with gonorrhoea, syphilis with NSU and syphilis with genital herpes. Thirty-eight patients reported at least one past STD, of which, gonorrhoea was the commonest.

Fifty-six patients had developed AIDS by CDC (Centre for Disease Control) classifications. Twenty asymptomatic patients had CD4 lymphocyte counts of less than 200cells/μl, 23 patients had pulmonary tuberculosis and 13 had other AIDS defining diseases. Of these thirteen patients, 5 had pneumocystic carinii pneumonia, 4 had disseminated histoplasmosis, 3 cytomegaloviral retinitis and 1 lymphoma. Thirteen had passed away.

Discussion

The majority of our patients, like those reported to the Ministry of Health, were between 20 - 40 years of age[1]. The racial distribution in our study population (Malay; 46%, Chinese; 38% and Indians; 11%) is very different from the national statistics where Malays made up 73% of cases reported, Chinese 15% and Indian 9%. This is because the majority of our patients are non-IVDUs and acquired their infection via sexual contact whereas the main risk factor for HIV infection nation-wide is through needle- sharing. Hence, our national statistics are more reflective of the number of drug dependants in our country where Malay, Chinese and Indians made up 71%, 16% and 11% respectively of all drug dependants registered[2].

Eighteen percent of our patients were females whereas females accounted for only 4% of the 26,178 cases reported to our Ministry. The small number of infected female patients, even in our study population, is probably due to the fact that injecting drug use is

mainly a male practice in our country. Hence, HIV infection is still confined to this subgroup of patients and has yet to spill into the general population. However, the number of infected females in Malaysia is increasing yearly[1]. Worldwide, women now represent 43% of those over the age of 15 living with HIV and AIDS[12]. Seventy-five percent of our HIV-positive females were married implying transmission from their spouses and highlighting the importance of empowering women to prevent infection from spouses. All currently available HIV/STD prevention strategies such as monogamy, condom use and treating STDs have significant limitations for women. Even when women are monogamous, their partners often are not. Women may risk rejection or even violence if they try to urge their partners to use condoms and condom use remains low in most countries including Malaysia[13-17]. The majority of women with STDs are asymptomatic and therefore they are dependent on their symptomatic spouses/partners or healthcare providers to alert them of their infections. The high percentage of single HIV-positive males (63%) coupled with the high proportion of men (53%) who visited sex workers signify potential spread of HIV into our heterosexual population and the need for aggressive measures to prevent sexual transmission.

The prevalence of STDs in our study population is high. Forty-nine patients (45%) had either syphilis, gonorrhoea, herpes genitalis, NSU or genital warts and 38 (35%) of them had history of past STDs. This high prevalence of STDs in our population is similarly seen in other HIV-positive populations[11]. STDs and HIV epidemics are interdependent. Several cross-sectional studies demonstrated a strong association between STDs and HIV infection[7-11,18]. Similar risky sexual behaviours may account for the clustering of HIV infection with other STDs but there is compelling evidence that classic STDs increases the probability of HIV transmission[7,11,18-20]. To prevent sexual transmission of HIV, the World Health Organisation (WHO) advocates complementing behavioural interventions with improved treatment services for classic STDs such as gonorrhoea, syphilis, chancroid and chlamydial infections. A randomised intervention study demonstrated a 42% reduction in HIV incidence in a rural population in Tanzania as a result of improved STD treatment[21]. There is also evidence indicating that STDs increase shedding of HIV and that treatment reduces this shedding[22]. Although the prevalence of STDs in our HIV-positive IVDUs is not known, several studies indicate that the majority of IVDUs in our country are sexually active and indulge in risky sexual behaviours[17,23-24].

This clinic population is well defined and different results may be expected in other clinics or other geographic areas with different populations, and varying rates of IVDUs. Nonetheless, we believe that the prevalence of STDs in HIV-positive patients is high although studies are needed to determine the sexual risk behaviour and prevalence of STDs in HIV-positive IVDUs in our country. Effective health education regarding the hazards of engaging in risk behaviours remains the most important strategy to contain HIV infection but early detection and prompt treatment of STDs in patients already infected with HIV to reduce their infectiousness may help to curb the HIV epidemic. Achieving rapid, substantial and sustained change in sexual behaviour is difficult. Hence, treatment of curable STDs may be one of the most cost-effective health intervention in HIV control.

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