

HIV Infection in Malaysia: A Report of Cases Seen at the University Hospital, Kuala Lumpur

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Summary

The spread of HIV infection into Malaysia is estimated to have occurred in the early 1980's. The first case of AIDS was reported here in 1986. As of March 31, 1994, the numbers have increased to 8049 HIV positive individuals detected in the country. The risk behaviours among those tested positive were intravenous drug use in 77.2%, sexual transmission in 4.5%, while the remainder are still under investigation. Pediatric AIDS constitutes 0.2% of positives. The high prevalence among intravenous drug users (IVDU) is likely to be due to mandatory testing for HIV upon entry to rehabilitation centres.

The trend of HIV infection in this country seems to be highest amongst the intravenous drug users. The increasing number of HIV infected prostitutes and heterosexuals in our population is worrying.

Since 1986, a total of 104 HIV positive individuals have been treated at the University Hospital, Kuala Lumpur, Malaysia. Of these, 25 have died and of those still alive, 5 have symptomatic disease. The most common AIDS-defining illness is *Pneumocystis carinii* pneumonia.

Education programmes have been developed targeting the various high risk groups and the general population.

Key Words: HIV Infection, AIDS, *Pneumocystis carinii*

Introduction

As late as 1987, Acquired Immunodeficiency Syndrome (AIDS) was thought to be a disease afflicting the Western population. Although the pattern of transmission of the Human Immunodeficiency Virus (HIV), was changing from predominantly homosexual towards spread among heterosexuals and injecting drug users, the South-East Asian nations were still denying that it could spread to this region. Therefore this region was unprepared for the sudden explosion of the epidemic which began perhaps in 1990.

Malaysia has a population of 18.2 million, with 51.1% between the age group of 15-49 years (personal communication; 1990 Population census, National Statistics Department).

The virus may have been introduced into Malaysia in the early 1980's. The first case of AIDS in Malaysia was reported from the University Hospital Kuala Lumpur in late 1986¹. Since then the number of HIV infected individuals have increased. The steepest rise was in the 3rd quarter of 1989 and the first quarter of 1990. There may be various reasons for this rapid

rise: 1) increase in detection through aggressive case finding, or 2) increase in awareness of the public, therefore people at risk willingly came forward to be tested, 3) mandatory testing of all IVDUs admitted to drug rehabilitation centres and prisons.

Up to March 31, 1994, the Ministry of Health Malaysia has reported 8049 HIV infected persons in the country.

At the University Hospital, we started an HIV/AIDS Register in 1986; and to date we have treated a total of 104 patients. We report our experience with HIV positive patients at the University Hospital.

Materials and Methods

This is a retrospective analysis of the HIV/AIDS cases registered at the hospital. Of the 104 patients registered, the records of 66 cases were studied in detailed because 10 were lost to follow up and 28 had incomplete data. The following data of the patients were collected and analysed: demographic data on all the cases, date of first HIV diagnosis, CD4+ measurements, date of first AIDS-defining illness (ADI), frequency of opportunistic infections, number of hospital admissions, days of hospital stay, whether the patient is alive or dead at the last date seen.

Statistical analysis was done using the statistical program Epi-Info 2.

Results

The age of the 66 patients ranged from 0 to 60 years, with the highest concentration between 21-40 years (Table I). There was a female to male ratio of 1:10. The risk factors in this cohort are shown in Table II. Intravenous drug use was the commonest mode of acquiring HIV infection constituting 54% of the group. At the time of analysis, 17 patients have already died.

There were a total of 73 episodes of ADI in the 66 patients. The most common first ADI was *Pneumocystis carinii* pneumonia (PCP) (32.9%) followed by esophageal candidiasis (16.4%).

During the course of the follow-up, twenty-eight patients had at least one CD4+ measurement done; of these, 54% had CD4+ below 500/uL. Of this group, 66% had one or more ADI at the first CD4+ measurement.

The AIDS related deaths are shown in Table III. The commonest cause of death recorded was fulminant pneumonia 23.5%; and PCP 17.6%.

Table I
Age group and sex : HIV and AIDS

Age group (years)	Frequency			Percentage
	Male	Female	Total	
0 - 10	1	0	1	1.5
11 - 20	1	0	1	1.5
21 - 30	35	2	37	56.1
31 - 40	19	3	22	33.3
41 - 50	2	1	3	4.5
51 and above	2	0	2	3.0
Total	60	6	66	100%

Table II
Risk factors vs age groups

Risk factor	Age groups						Total	%
	0-10	11-20	21-30	31-40	41-50	51 and above		
Bisexual	0	0	2	1	0	0	3	4.6
Heterosexual	0	1	6	6	0	0	13	20.0
Homosexual	0	0	5	3	0	1	9	13.8
IVDU	0	0	22	11	1	1	35	53.8
Maternal Fetal	1	0	0	0	0	0	1	1.5
Transfusion Related	0	0	1	1	2	0	4	6.2
	1	1	36	22	3	2	65	100

Table III
Causes of death

Cause of death	Frequency
PCP	3
FULM. Pneumonia	4
ABD. Lymphoma	1
CMV. Pneumonia	1
CRYPTO. Meningitis	1
Pneumonia	1
SBE + Cerebral Bleed	1
Septicaemia	1
Toxoplasmosis	1
Trauma	1
Unknown	2
Total	17

A Kaplan-Meier survival curve was done and two parameters were analyzed: 1) survival after HIV diagnosis, 2) survival free from AIDS defining illness (ADI) (Fig. 1). The probability of survival at 1000 days (2.7 years) after HIV diagnosis is 50%; and survival free from ADI at 2 years is 50 per cent. The

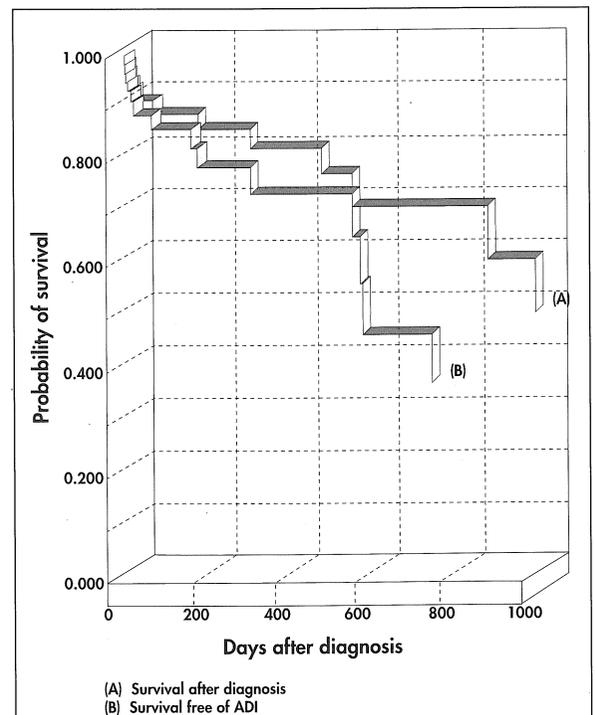


Fig. 1: Kaplan-Meier survival curve showing:
a) Survival after HIV diagnosis
b) Survival free from ADI

reasons for poor survival in our patients are due to :
1) delay in detection of HIV infection, 2) patients

presenting late in the course of the disease (35 of 66 patients), 3) poor compliance to follow-up and 4) non-availability of zidovudine until recently.

Conclusion

Although the local figures show that the prevalence of HIV infection in Malaysia is predominantly among the intravenous drug users, we believe that the rising incidence in the heterosexual population will be a major problem in the near future. Also because HIV infection predominantly affects the young population, it will adversely affect the economy of the country².

Looking at the survival patterns of HIV infection in Malaysia, it is far worse than those reported from the West. We believe that survival in our patients will improve if HIV infection is detected early with regular medical follow-up and counselling services provided. Regular medical assessment of the patient includes a full clinical examination and CD4+ T lymphocyte measurements³. Declining CD4+ cell counts

corresponds with decreasing immune status and the development of opportunistic infections⁴. The timely use of prophylaxis and antiretroviral agents will alter the survival of HIV infected individuals.

Although education programs have been implemented since 1988, the effectiveness of these programs in modifying behavior has not been fully evaluated.

Community support services and participation of the Non-governmental organisations (NGOs) are still in the infancy stage. A lot more needs to be done to minimise the spread of HIV infection in our population. Well structured STD control programmes and adequate management strategies have to be implemented throughout the country.

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