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Medico-demographic Features of Pregnant Women with HIV Infection

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ABSTRACT

Objective To assess medical and demographic characteristics of HIV infected pregnant women attending obstetric care.

Design Retrospective descriptive study.

Setting Department of Obstetrics and Gynaecology, Chiang Mai University.

Subjetcs Between January 1989 and December 1994, 195 HIV infected pregnant women were included in the study.

Results Mean maternal age was 25.1 years, 62.1% were primigravida and 16.9% had previous history of abortion. Employee and commercial sex worker accounted for 48.2% and 2% of the cases and 6.7% had previous history of commercial sex workers. Mean age at first marriage was 21.1 years. The indications for blood testing included HIV-positive sexual partners, condyloma acuminata infection, positive VDRL, pyrexia of unknown origin and having a previous child with AIDS. Most of the cases were asymptomatic HIV infection, but 52.3% had complications during various periods of pregnancy. Deliveries with viable fetus occurred in 56.6% with mean birthweight of 2,883.7 gm, while 30.3% pregnancies were terminated with therapeutic abortion. Tubal resection and hormonal implantation were performed in 45.3% and 26.3% respectively. The prevalence of serodiscordance occurred in 9.2% of the test. Anti-HIV testing during pregnancy should always be considered with pre-and post-test counseling since this process will allow them to make a proper and correct decision with regards to children, their family life. Prevention of disease spreading and proper medical care are also the benefit of the test.

Key words : medico-demographic features, pregnancy, HIV infection

The first case of AIDS was reported in Thailand in September 1984. The HIV infected patients are now around 600,000-800,000 cases. The number of cases has been rising rapidly. The Ministry of Public Health had initiated policy of sentinel HIV serosurveillance among 7 target groups in June 1989. Pregnant population, one of 7 target groups, was found to have an increasing seropositive rate from 0 % on the survey in June 1989 to 1.5 % on the survey in December 1993. Chiang Mai, one of the large provinces in the northern part of Thailand, is reported to have the highest number of AIDS cases. Sentinel HIV seropositive surveillance among pregnant women in Chiang Mai increased rapidly from 1% on the survey in June 1989 to 7.9 % on the survey in December 1993.[1] This trend brought with it many problems in socio-economic, psychological and medical aspects. Seropositive pregnant women should be given effective counseling to reduce their anxiety about pregnancy, family life and progression of disease. The effective counseling included not only the information on the natural history of HIV infection but also the option of therapeutic abortion or continuing pregnancy and methods of contraception.

The objective of this study is to determine the medical and demographic features of pregnant women infected with HIV.

Materials and Methods

One hundred and ninety-five pregnant women with HIV infection, who attended obstetric care at Chiang Mai University Hospital during 1st January 1989 to 31st December 1994, were studied. Data of medical and demographic characteristics were collected and analyzed by percentage.

Results

Demographic features

During six years of the study (1989-1994), the total deliveries in our hospital were 42,080 and 195 pregnant women with HIV infection were found. The mean maternal age of 195 pregnant women was 25.1 ± 5.6 years (17-44 yrs). Majority of the cases were in the age group of 20-24 years (43.1%) (Table 1). Nearly half of the cases (48.2%) were employees and 2.0% of the cases still performed commercial sex working during pregnancy (Table 2). History of ex-commercial sex workers could be taken from 13 of 195 cases (6.7 %). Most of the cases (75.4%) resided in Chiang Mai, 22% lived in other 6 provinces of northern part of the country. The rest were from other provinces (Table 3). Regarding marriage, the average age at first marriage was 21.1 ± 4.5 years (13-39 yrs) (Table 4) and 50.2% of the cases had only one marriage. The maximum number of marriage was three and about 3.1% had number of six. (Table 5)

Medical features

Of 195 pregnant women with HIV infection, 121 cases (62.1%) were primigravida and 33 cases (16.9%) had history of abortion (Table 6). HIV infection before and during pregnancy were

Table 1. Maternal age (n = 195)

years	cases	percent
15 - 19	20	10.3
20 - 24	84	43.1
25 - 29	52	26.7
30 - 34	25	12.8
35 - 39	9	4.6
40 - 44	4	2.0
Unknown	1	0.5

Table 2. Maternal occupation (n = 195)

	cases	percent
Employees	94	48.2
Housewives	37	19.0
Farmers	37	19.0
Traders	20	10.3
Prostitutes	4	2.0
Unknown	3	1.5

Table 3. Residence (n = 195)

	cases	percent
Chiang Mai	147	75.4
Lamphun	24	12.3
Chiang Rai	9	4.6
Lampang	4	2.1
Phayao	3	1.5
Mae Hong Son	2	1.0
Phrae	1	0.5
Others	4	2.1
Unknown	1	0.5

Table 4. Age at first marriage (n = 195)

years	cases	percent
10 - 14	2	1.0
15 - 19	49	25.1
20 - 24	52	26.7
25 - 29	9	4.6
30 - 34	5	2.6
35 - 39	3	1.5
Unknown	75	38.5

Table 5. Number of marriages (n = 195)

	cases	percent
1	98	50.2
2	37	19.0
3	6	3.1
unknown	54	27.7

Table 6. Order of pregnancy and number of abortion (n = 195)

Order of Pregnancy	cases	percent	Number of abortion	cases	percent
1st	121	62.1	0	157	80.5
2nd	43	22.1	1	26	13.3
3rd	17	8.6	2	4	2.1
4th	6	3.1	3	2	1.0
5th	1	0.5	4	0	0
6th	2	1.0	5	1	0.5
Unknown	5	2.6	Unknown	5	2.6

Table 7. Reasons for serological testing (n = 195)

	cases	percent
ANC screening	52	26.7
Seropositive sexual partners	27	13.8
C.acuminata	23	11.8
+ve VDRL	20	10.3
Fever	7	3.6
Siblings with AIDS	7	3.6
Self request	7	3.6
AIDS	8	4.2
Herpes simplex genitalis	3	1.5
Prostitutes	3	1.5
Accidental exposure	3	1.5
History of +ve VDRL and prostitute	3	1.5
C.acuminata and +ve VDRL	2	1.0
Abnormal pap smear	2	1.0
Salmonella choleraesuis septicemia	2	1.0
Pre-medical or surgical care	12	6.3
* Others	8	4.1
Unknown	6	3.1

* M. contagiosum, IVDU, employer's request, septic criminal abortion, history of PID, recurrent vaginal candidiasis, mental retardation.

68.2% and 15.4% respectively. The reasons for serological testing as shown in Table 7 were mainly ANC screening (26.7%). The next three reasons were seropositive sexual partners, Condyloma acuminata infection and +ve VDRL. 3.6 % (7/195) had blood testing because of self request whilst 1.5% (3/195) had blood test because of accidental exposure, one from needle prick during episiotomy repair and two from conjunctival contamination of blood. There were 8 cases of AIDS, which were the reason for testing. However, there were some pregnant women who requested HIV test for themselves without any indications and a large proportion of the cases were referred to our unit because of positive blood test. Pre-medical or surgical care as the reason for testing meant that serological testing was requested by doctors, surgeons or orthopedists before performing medical care or operation.

Regarding pregnancy complications, 52.3% of cases had complications during various periods of pregnancy. Most of the cases (34.4%) had complications during pregnancy and then during pregnancy and post partum (8.7%). The main complication was infection such as condyloma acuminata, syphilis, herpes zoster, herpes simplex. Outcomes of pregnancy ended with

Table 8. Symptomatic HIV infection and AIDS cases versus manifestations of disease and outcomes of pregnancy (n = 26)

Year	No.	Antepartum	Intrapartum	Postpartum	Outcome
1991	1.	Enlarged cervical node Hepatosplenomegaly	-	-	S. abortion
1992	2.	-	-	Herpes zoster	F 2,850 gm
	3.	S. choleraesuis septicemia	-	-	M 3,700 gm
	4.	Herpes zoster	-	-	F 3,300 gm
	5.	Herpes zoster			M 3,150 gm
1993	6.	Herpes zoster	-	-	M 3,100 gm
	7.	-	-	S. choleraesuis septicemia	M 3,100 gm
	8.	PCP, oral thrush	-	-	S. abortion
	9.	CMV retinitis	-	-	T. abortion
	10.	PCP, oral thrush	-	-	M 1,240 gm
	11.	Herpes zoster, oral thrush	-	-	M 3,700 gm
	12.	-	Herpes simplex labialis	-	M 2,600 gm
1994	13.	Herpes zoster	-	-	F 2,750 gm
	14.	Herpes zoster	-	-	M 3,150 gm
	15.	Herpes zoster	-	-	T. abortion
	16.	-	-	S. choleraesuis septicemia	F 3,250 gm
	17.	PCP, oral thrush	-	Cryptomenigitis	T. abortion
	18.	PCP, oral thrush	-	-	M 2,350 gm
	19.	Chicken pox	-	Fever, Drug allergy	F 3,000 gm
	20.	Recurrent vg. candidiasis	-	-	M 3,370 gm
	21.	Recurrent fungal infection of skin	-	-	T. abortion
	22.	Chronic diarrhea, wt.loss, pruritic dermatitis	-	-	T. abortion
	23.	PCP, oral thrush, epitaxis	-	-	F 2,100 gm
	24.	-	2° ITP	-	F 2,600 gm
	25.	Herpes zoster	-	-	F 2,900 gm
	26.	Penicillosis of skin oral thrush, fungal septicemia	-	-	T. abortion

Notes : M - Male, F - Female, S.abortion - Spontaneous abortion, T.abortion - Therapeutic abortion, PCP - Pneumocystis carinii pneumonia

Table 9. No. of marriages versus result of sexual partner's serology

No. of marriage Result	1	2	3	Unknown
Negative	6	8	0	0
Positive	74	20	4	30
Not tested	18	9	2	24
Total	98	37	6	54

deliveries in 56.6%, therapeutic abortion in 30.3%. Mean livebirth weight was 2,883.7 ± 491.0 gm (range 1,200-3,940 gm). Concerning methods of contraception, tubal resection and hormonal implantation were performed in 45.3% and 26.3% of cases respectively. Six of 190 cases were unwilling to use any methods. Table 8 showed the symptomatic HIV infection and AIDS cases versus manifestations of disease and outcomes of pregnancy. Among 141 sexual partners who had blood taken for serological testing, 9.2% (13/141) had negative result. Considering the number of marriages versus the result of sexual partners's serology, we found that 6 of 98 males (6.1%) and 8 of 37 males (21.6%) whose wives got married for the first time and second time respectively still had negative result (Table 9).

Discussion

This study revealed that the majority of pregnant women were infected by heterosexual contact with their sexual partners and the age at first marriage was so young. This would result in long period of child bearing period, leading to an increase of HIV infected infants. The magnitude of HIV infected infants may be reduced through advanced planning and effective counseling to help seropositive pregnant woman make their reproductive decisions, family life-style and cope with consequences of HIV infection.

Almost half the studied cases had complications during pregnancy. The complications were coinfection with STDs and advanced stage of HIV infection affecting the outcome of pregnancy. The infants born to infected mothers with antenatal complications have a higher risk to be HIV-infanted infants. The risk of maternal-infant HIV transmission can be reduced by using zidovudine which its effectiveness maximized in the infants born to asymptomatic pregnant woman.[2,3] Though further clinical trials to evaluate the efficacy of antiretroviral therapy in symptomatic HIV infected pregnant women to reduce perinatal transmission of HIV are needed, the regimen should be presented and discussed with the pregnant women.

Our studied group belongs to the low social class for whom information is not available. Existing data shows no evidence to support the effect of HIV infection on intrauterine growth retardation. In this study, minority of infants born to infected mothers were classified as low birthweight which may be the effect of HIV infection on birthweight. The obstetricians should provide the proper antenatal care for HIV infected pregnant women to reduce the maternal morbidity and maternal-infant HIV transmission. The proper

prenatal care includes investigation and treatment fo coinfection with STDs and opportunistic infections, surveillance of intrauterine fetal growth and maternal mental support. Therapeutic abortion was the mode of pregnancy termination choosen by 30% of studied group. This figure is expected to be higher in the future. Regarding testing of HIV infected among sexual partners of pregnant women, we recommend it to be the "must" policy because 10% of sexual partners of our studied cases were seronegative. The result of testing is beneficial to themselves in changing sexual practice, family life and self care. The health care providers also have to stress to the couple on using the condom for controlling the disease spreading and slowing the advanced stage.

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