Original Article

SOCIO DEMOGRAPHIC AND CLINICAL PROFILE OF HIV POSITIVE ANTENATAL WOMEN REGISTERED IN PPTCT CENTRES, SURAT, GUJARAT

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ABSTRACT

Objective: The present study reports the socio demographic and clinical profile of 127 HIV positive antenatal women and their husbands. The findings of the study will be helpful for policy decision makers to address the issues of a specific vulnerable group.

Materials and Methods: During Jan 2007 to Dec 2008, a total 282 antenatal women were referred to 5 PPTCT centres for HIV testing and counseling. Of these 127 (45%) antenatal women who came to collect their reports could be contacted for this study. The husbands of the 127 HIV positive antenatal women were contacted to collect their information.

Result: Mean Age of HIV positive antenatal women was 25.5 ±3.8 years, more than 50% were in the age group of 20-25 years and 18.9% of HIV positive antenatal women were illiterate. HIV positivity rate in spouse was 80%. Two third women were diagnosed HIV positive in 2nd & 3rd trimester of pregnancy. Among the positive 60 (47.3%) were primi gravidas, 27 (21.3%) mothers were not tested for CD4 count. However 98 (77%) mothers were registered in ART centre and 35% HIV positive antenatal women were on ART.

Conclusion: HIV positive pregnant women were younger, primi and housewives. HIV positive antenatal women need to be followed rigorously to link them to ART services.

Keywords: HIV, Antenatal, ART, PPTCT

INTRODUCTION

Surat is one of the major industrial cities of India with maximum migrant workers and floating population working in diamond and textile industries in the state, has the highest number of AIDS patients in the state. The global HIV epidemic is rapidly "feminizing." [1-6] Increasing numbers of women are HIV-infected worldwide and within the Indian context, women account for an estimated 40% of cases among the 2.5 million people living with HIV/AIDS. [7] In India, women account for around 1 million out of the 2.5 million estimated numbers of people living with HIV/AIDS. [4] Gujarat HIV Sentinel Surveillance (HSS 2007) covering 9517 pregnant women (ANCs), showed the median positivity rate of 0.46% HIV infection among ANCs.[3] Parent to child transmission (PPTCT) is an important route for HIV infection in children responsible for over 90% of new infections in infants and young children globally.[12]

According to National AIDS Control Organization (NACO), about 30,000 infants are estimated to acquire HIV infection each year.[2] Treatment with ART can cut transmission of HIV by 40-70 percent, preventing more than 200,000 infants from contracting the virus from their mothers each year.[13, 14] More than 20 years into the human immunodeficiency virus epidemic, women account for nearly half of the 40 million people living with HIV worldwide, with an even higher proportion existing in developing countries. Social determinants of female vulnerability to HIV include gender disparities, poverty, cultural and sexual norms, lack of education, and violence. Prevention strategies must address the wide range of gender inequalities that promote the dissemination of HIV. [15] Despite reductions in prevalence of human immunodeficiency virus (HIV) infection among the general population of India, women account for a rising percentage of all HIV cases with husbands' risk behaviour described as the major source of women's infection. Intimate partner violence (IPV) has been described as being associated with heterosexual transmission of HIV to women in India and elsewhere. Among married Indian women, physical violence combined with sexual violence from

husbands was associated with an increased prevalence of HIV infection. [16] Heightened vulnerability of HIV positive antenatal mothers has so many reasons including biological , poverty, low literacy levels, cultural and religious factors, as well as stigma and discrimination .[5, 6]. Persons who do not maintain a 95% adherence rate to ART are at risk for treatment failure and adverse clinical outcomes. [8]

MATERIAL & METHODS

This cross-sectional study enrolled a sample of 282 HIV positive antenatal women registered during January 2007 to Dec 2008 in 5 PPTCT centres of Surat city. The study was conducted from December 2008 to November 2010. Participants were interviewed with quantitative questionnaires. The study protocol was approved by the Institutional Ethics Committee (IEC), Smimer, Surat, prior to implementation of the study and Ethical clearance from GSACS was obtained. Before collecting information, written consent was obtained from all participating HIV positive antenatal mothers and they were assured about the confidentiality of information. Data was collected according to Pretested & Predesigned Proforma by Records of the PPTCT and ART centres with the help of counselors of the centres. Follow up was done for assessing the outcome by data from PPTCT and ART centres or by periodic house-to-house visits with the help of Out Reach Workers (ORW) for those women who could not be contacted during the first visit.Participants: HIV positive antenatal mothers registered in 5 PPTCT centres of Surat city between January 2007 to December 2008 who were in contact for a period of 18 months were included in this study.

OBSERVATIONS AND DISCUSSION

Mean Age of HIV positive antenatal women was 25.5 ±3.8 years and that of husband was 30.6 ±3.8 years. Table 1 shows more than 50% of antenatal mothers were in the age group of 20-25 years While 50% husbands were in the age group of 25-30 years and 32.3% were in the age group of 30-35 years. This age group is sexually active and vulnerable to HIV, unawareness regarding HIV is greater compared to other age groups and hence they are exposed easily. Child bearing is most at this reproductive age group. High prevalence in this group can be considered as forecasting of financial burden as well as loss of youth for the nation.

Table 1 shows 18.9% of HIV positive antenatal women were illiterate, 7.9% were just literate, 39.4% received education up to primary while 27.6% were educated up to secondary and only 6.3% of the antenatal women were graduates and above. While 5.5% Husbands were Illiterate and 3.1% husbands were just literate, 39.4% were educated up to primary level and 45% Husbands were educated up to secondary level while 7.1% were graduates. So in both maximum number were in the category of primary education and secondary education respectively which means education up to secondary level did not protect against HIV, behaviour of primary education was not reflecting and there was only 7.9% & 3.1% were in just literate group so that might be due to traditional values in them which might be the reason to not exposed to HIV and HIV Positivity among graduates were only 6.3% & 7.1% because they were really educated.

Table: 1 Age and Education & Occupation wise distribution of HIV positive Antenatal women and their Husbands

Characteristics	HIV positive Antenatal women (%) (n= 127)	Husbands (%) (n= 127)
Age (yrs)		
<=20	8(6.3)	0(0)
20-25	67(52.8)	11(8.7)
25-30	40(31.5)	67(52.8)
30-35	10(7.9)	41(32.3)
>35	2(1.6)	8(6.3)
Education		
Illiterate	24(18.9)	7(5.5)
Just literate	10(7.9)	4(3.1)
Primary	50(39.4)	50(39.4)
Secondary	35(27.6)	57(44.9)
Graduate & above	8(6.3)	9(7.1)
Occupation		
Housewife	103(81.1)	0 (0)
Labour	17(13.4)	86 (67.7)
Service	4(3.1)	14(11)
Business	0 (0)	14(11)
Others	3(2.4)	13(10.2)

Table 1 also shows more than 80% were housewives while 13% were occupied in labour work and others (2.4%) were working as Beautician or Vegetable Seller. Only 4% were in service. In this study HIV positivity was more in Housewives that might be due to less education and husband might be involved in extramarital affairs or be visited to CSWs. And our social structure is such that women are still backstage and considered ornamental in the household. That's why decisions might be taken by husbands only even in sex making women had no choice for safe sex due to economic dependence. Employed women have a bigger say in decision making and healthier life style.

Maximum numbers (67.7%) of husbands were doing labor work and 11% were doing business and same for service. While others 10% were Barber, Carpenter, Vegetable Vendor, Welder, Makhan Seller, Milk seller, Garage worker, POP worker, Working in photo studio, etc. so in this study maximum no. of people in labour class are exposed to HIV. Though due to less sample size, could not conclude that HIV was predominant in any specific occupation. As in Surat city due to high opportunities of work and survival, so many outsiders migrate here and stay away for long periods from the families. Due to promiscuity and long period of separation from families, they get infected.

Table 2: Distribution of HIV status of Husbands

HIV status of Husband	Frequency (n=127)(%)
Not tested	2 (1.6)
Positive	102 (80.3)
Negative	23 (18.1)

Table 3: Distribution of HIV Positive Antenatal women according to Pregnancy when HIV was diagnosed

Duration of Pregnancy	Frequency (n=127)(%)
Before Pregnancy	19 (15.0)
First Trimester	11 (8.66)
Second Trimester	48 (37.79)
Third Trimester	47 (37.00)
During Labor	2 (1.60)

Table 4: Total Number of Previous Children of HIV Positive Antenatal women (Live/Died)

Number of Children	Antenatal Mothers (n=57) (%)
1	42 (73.68)
2	14 (24.56)
6	1 (1.75)

Table 5: Status of Gravidas among HIV Positive Antenatal women

Gravida	HIV positive Antenatal women (n=127)(%)
1	60 (47.3)
2	38 (29.9)
>=3	29 (22.8)

Table 2 shows, 80% Husbands were positive for HIV status. Most of them picked up HIV infection from commercial sex workers and later transmitted to their wives or very few might be got infected due to Blood transfusion history. And 18% were negative, so in this case the antenatal women might be exposed due to having extramarital affairs or positive before marriage or due to Blood transfusion history. So maximum (80%) positivity in antenatal women were due to their husbands.[17]

It was not possible to counsel all the husbands of HIV positive antenatal women because many husbands were labourers, Rickshaw pullers, drivers which were belonging to low socio economic status and because of their loss of daily wages they couldn't attend the clinics .Therefore they didn't realize the importance of attending the clinic for HIV testing. Practically the husbands are not always accompanying women in antenatal clinics. Secondly there is an attitude of why I need to be tested if my wife is pregnant. Thirdly, if the husband had any high-risk behaviour he refused to undergo the test due to fear of diagnosis. In our society, the rearing of a child is still considered to be a job of a woman.

Table 3 shows that 15% antenatal women were diagnosed before pregnancy so in spite of knowing HIV status she had been conceived again that might be due to wish for male child, husbands' or in-law's pressure or mother's obsession. 9% mothers were diagnosed in first trimester so they were aware about antenatal check ups and visits. 75% mothers were diagnosed in 2nd & 3rd trimester of pregnancy so they were not aware about importance of antenatal visits even though there were easily accessible healthcare facilities and so many urban health centres with maternity homes which provide antenatal services. And 2% mothers were diagnosed at the time of labour, might be due to not attending any antenatal visits or due to having window period of HIV in previous visit.

Similar findings were found in the study in Nigeria by Sheela Maru, out of 91 HIV positive antenatal women, there was no women who diagnosed or enrolled in first trimester and 25% diagnosed in second trimester while maximum (75%) were diagnosed during third trimester. [18]

Onah HE et al. studied that out of 87 HIV positive antenatal women, 20 (23.0%) women were diagnosed prior to the pregnancy which correlates with our study (15%), while 67 (77.0%) were diagnosed during the pregnancy. [21]

Table 4 depicts, 74% antenatal women, who had 1 previous child and 25% were 2 previous children. And only 1 woman was having 6 previous children. So even after having children they again got conceived, some mothers might know their status and some might not. Those antenatal women, who again became pregnant even after knowing their HIV status in previous pregnancy, were due to desire for male child, family and husband's pressure and unaware about family planning or safe sex.

Table 5 shows that in spite of knowing HIV status, 67 (52.7%) women were ready for 2nd & 3rd pregnancy and 60 (47.3%) were primi gravidas when HIV was diagnosed as they were carrying the first pregnancy, they were more aware and ready for antenatal check up in tertiary hospital. Nishi Suryavanshi et al. found similar findings among 101 HIV positive pregnant women, 49(48.5%) women were primiparous and 52 (51.5%) were multiparous. [22]

Sheela Maru studied among 91 HIV positive antenatal mothers in Nigeria that there were 45 (49%) women who were primigravida or second time pregnant and 46 (50%) women were multigravidas. [18]

Inability to terminate the pregnancy and familial obligations appear to be important for continuing the unplanned repeat pregnancy. Despite high reported contraceptive use by HIV-positive women, pregnancies still occurred. Repeat pregnancies were more likely to occur for women who did not disclose their HIV status to their spouse. Thus the majority of the repeat pregnancies for HIV-positive women were both unplanned and unwanted.

Out of 127 HIV positive antenatal mothers, 100 (78.7%) women were tested for CD4 counting while 27 (21.3%) mothers were not tested for CD4 count.

That might be due to they did not know the value of CD4 count or they were not convinced by PPTCT

counsellor, counselling was not much effective. There are many reasons for defective counselling like counselling technique & skill of counsellor was not much effective. Or there was too much burden of patients on the counsellor and there was lack of privacy for patients' means no separate room for counselling and in HIV patients, confidentiality should be strictly maintained. They might be not aware about importance of testing of CD4 count or they did not bother about doing CD4 count.

Mandala J et al. found in study in zambia that out of 14,815 HIV-positive pregnant women registered in the 60 PHCs, 2,528 (17.1%) had their CD4 cells counted; of those, 1,680 (66.5%) had CD4 count results available at PHCs; of those, 796 (47.4%) had CD4 count<or=350 cells/mm3 and thus were eligible for combination antiretroviral treatment (cART); and of those, 581 (73.0%) were initiated on cART. [19]

Table 6 shows Out of 127 HIV positive antenatal women, 98 (77.2%) were registered in ART centre but 29 (22.8%) were not registered. As this again depicts that they might not aware about doing registration in ART centre or they might not be convinced by Counsellor for registration. They should know the importance of registration as in future they will have to take treatment from ART centre only. They should know about facilities of ART centre that provide antiretroviral drugs free of cost to all patients. Counsellor should explain everything including registration, drugs etc. so there might be defective counselling or information by counsellor was not gained by the mothers/husbands.

Moth IA et al. [20] found in the study in Kenya that knowledge of PMTCT was inadequate even after counselling, as participants could not recall the information divulged during counselling. In addition, 80% of clients(out of 133) did not present for follow-up counselling irrespective of HIV status, and 95%, did not disclose positive HIV status to spouses/relatives for fear of stigma, discrimination and violence and unsupportive spouse.

Inadequate counselling services delivered to clients affected service utilisation, in that significant dropout occurred at the stages of HIV result, enrolment, and delivery due to fear of positive HIV result, chronic illness and inability to pay for the services. [19]

Table 6: Awareness of antenatal women regarding registration/initiation of treatment at ART centres.

	HIV positive antenatal women (%) (n=127)
Registration	
Registered in ART centre	98 (77.2%)
Not registered	29 (22.8%)
Treatment status	
On ART	44 (35%)
Not on ART	83 (65%)

Table 6 shows out of 127(100%) only 35% HIV positive antenatal women were on ART. Again they did not know the value of antiretroviral therapy or they were not convinced by PPTCT counsellor, counselling was defective. Or due to migration they were not bothered to start ART so they could not get benefit of ART. And some registered women might be had good CD4 count so they might not be in category to start ART.

Table: 7 Initiation of ART among HIV Positive antenatal women who were registered in PPTCT centres

ART started in PPTCT registered antenatal women	Number (%)
Yes	44(45)
No	54(55)
Total	98(100)

They might be not aware about importance of taking ART as in our Indian society; person visits the doctor only when symptomatically ill. So they might not taking ART as they might be in earlier phase of HIV so might be symptomatically well. Mandala J et al. found in the study in Zambia that out of 14,815 HIV-positive pregnant women registered in the 60 PHCs, 2,528 (17.1%) had their CD4 cells counted; of those, 1,680 (66.5%) had CD4 count results available at PHCs; of those, 796 (47.4%) had CD4 count<or=350 cells/mm3 and thus were eligible for combination antiretroviral treatment (cART); and of those, 581 (73.0%) were initiated on cART. [19]

Table 7 showing Registration to ART centres and initiation of ART among HIV Positive antenatal women who were registered in PPTCT centres was poor during the entire study period.

Out of 127 HIV positive antenatal women, 98(77%) women were registered in ART centre while 29 (22.8%) were not registered. HIV Positivity in children is less in registered women, HIV transmission rate was 4.34% among registered womencompared to 13.3% among not registered women in ART center.

The HIV-positive mothers face stresses such as poor social support, stigma, and fear of abandonment. [9] They experience anxiety, guilt, and distress as a result of their infants' HIV status. [10] Out of 127(100%), only 44 (35%) mothers were on ART. ART was effective for prevention of transmission of HIV in child from mother. HIV transmission rate is 3.1% in children whose mothers were on ART compared to 7.7% in children whose mothers were not on ART.

CONCLUSION

Hence targeted intervention among HIV positive antenatal women carried out by hospitals to prevent parent to child transmission but considering the vulnerability of this group and cumulative data of PPTCT and ART centers, the study is planned to determine the socio-demographic profile and to know treatment compliance of HIV positive antenatal women who were taking ART from ART centres of Surat city. The

findings of this study may help in restructuring the current national policy for targeted intervention- the first step towards reducing percentage of parent to child transmission in Surat city with the help of doing regular CD4 count testing, timely ART initiation and adherence to ART.

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