

Table 2 Influence of educational status on utilization of antenatal clinic (ANC) services

	Utilize ANC services	Do not utilize ANC services	Total
	No. (%)	No. (%)	
<i>Mother's educational status</i>			
None	10(41.7)	14(58.3)	24
Quranic	46(49.5)	47(50.5)	93
Primary	36(75.0)	12(25.0)	48
Secondary	12(85.7)	2(14.3)	14
Post secondary	5(100.0)	—	5
Other	9(62.3)	7(37.7)	16
Total	118(59.0)	82(61.0)	200
<i>Husband's educational status</i>			
None	2(33.3)	4(66.7)	6
Quranic	39(45.3)	47(44.7)	86
Primary	25(58.1)	18(51.9)	43
Secondary	30(83.3)	6(16.7)	36
Post secondary	16(80.0)	4(20.0)	20
Other	6(66.7)	3(33.3)	9
Total	118(59.0)	82(41.0)	200

lower than that obtained in developed countries.¹ Reasons given for non-attendance included lack of motivation, non-accessibility, inability to afford costs, cultural and religious factors plus negative roles played by husbands. These are similar to findings elsewhere.^{4,5} Cultural and religious practices, for instance, the 'purdah' practised in this environment, prevent women from leaving their houses during the daytime.⁶

The higher attendance rates among younger mothers compared with their older counterparts could be explained by the fact that older mothers are probably more confident, being ignorant of increased risk with advancing age and parity. Maternal education affected antenatal care utilization positively. All the women who had post-secondary education and those whose husbands were educated utilized antenatal care services. Therefore, the differential school enrolment rates with very low rates for the girl child and withdrawal of children from school for marriage or apprenticeships pose a serious challenge to the efforts of decreasing maternal mortality in the long term.⁷

Maternal occupation, like educational achievement, showed a positive influence where all civil servants among the women utilized antenatal services. Those women engaged in one type of trade or another showed higher utilization than those who were housewives with no other occupation. Therefore, education with improved economic status of a community leads to increased utilization of antenatal services.

Enlightenment programmes on the importance of antenatal care should be stepped up. Girl child education and adult education classes should receive the priority they deserve. Since most of these women attend Islamiyya schools, this may be an opportunity to integrate it with some form of basic education.

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Prevalence of HIV infection in pregnant women in remote rural areas of Maharashtra State, India

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SUMMARY In a study of 304 pregnant women, the prevalence of HIV infection in remote rural areas of western India was 0.7% (confidence interval 0.08-2.3%). It is nearly 2½ times higher than the presumed prevalence for this part of the country.

Introduction

In the last few years the HIV pandemic has shifted to Asia. Among the Asian countries, India is estimated to have the large burden of HIV infection.¹ HIV infection was first reported exists in India among the commercial sex workers from Chennai in 1986. The infection has since spread considerably and it has been recently estimated that nearly 3.82 million to 4.58 HIV infection exists in India.² It has been reported that the HIV epidemic is no longer restricted to persons with high-risk behaviour in the urban areas, but it is also spreading in the general population.⁴

Limited data are available from rural areas where nearly 60% of the Indian population resides. Some recent studies carried out in south India have indicated that HIV

has reached rural areas.⁵ The sero-prevalence of HIV infection among pregnant women has been traditionally used as a reliable indicator of the status of HIV epidemic among in persons with low-risk behaviour. However, the data on HIV infection among pregnant women have mostly originated from urban hospitals⁶ and centres as a part of sentinel surveillance or some cross-sectional surveys and most of the available rural data are from areas very close to large cities.

The main objective of the present study was to assess the extent of spread of HIV among pregnant women in remote rural areas of Jamkhed taluk of Ahmednagar district of Maharashtra state in India. The subsidiary objective was to assess the extent of risk behaviour in the context of HIV/AIDS among rural pregnant women.

Methods

The study was carried out from July to October 2000 covering all pregnant women from 34 villages with a total population of 46,926, in Ahmednagar district of Maharashtra state, India. After informed consent peripheral blood samples in duplicate were collected on filter paper strips, coded and tested. One rapid HIV test was performed at CRHP, whereas the testing algorithm followed at serology laboratory of NARI consisted of two enzyme-linked immuno-sorbent assays (ELISA) for antibodies to HIV-1 and HIV-2. Samples that tested positive in the first test were subjected to the second rapid ELISA. Only samples that were found to be reactive in the rapid as well as two ELISA tests were considered as positive. An interview schedule was administered to collect data on demographics and risk behaviour. Univariate analyses were carried out to study the relationship between HIV seroprevalence and various study variables and frequencies were calculated.

Results

Two women out of 304 study participants (0.7%; 95% confidence interval [CI] - 0.08, 2.3) were found to be HIV sero-reactive. Both HIV-positive pregnant women were married for 10 years, reported being monogamous, from middle class joint families and had no reported risk behaviour. Table 1 presents the relationship between the HIV sero-status and the demographic factors and risk behaviour. Both HIV-positive pregnant women were housewives and did not do any other indoor or outdoor occupations. One was illiterate and the other woman was educated up to primary school. Both HIV sero-positive women were in their third pregnancy. Additionally, both were 24 years old of age, and were already married for nearly 10 years. Both the HIV-infected women had no evidence of any history of high-risk behaviour and both insisted that they did not have sexual relationship with anybody other than their spouses. The spouse of one of the HIV-infected women was a migrant worker in a nearby city, and the other had a beetle-nut shop on the highway. The above data strongly suggest that the nature of getting HIV infection among the affected women was through their spouses.

Conclusion

HIV is spreading in urban and rural India and this study highlights the fact that HIV had made significant inroads

Table 1 Demographic profile, risk factors and HIV seroprevalence

Category	Details	Total surveyed		HIV sero-status	
		No.	(%)	Negative	Positive
Age	Up to 20	165	(53.9)	165	0
	21-26	125	(40.9)	123	2
	Above 26	16	(5.2)	16	0
Marital status	Married	304	(99.3)	302	2
	Unmarried	2	(0.7)	2	0
Education	Illiterate	127	(41.6)	126	1
	Up to primary	72	(23.6)	71	1
	UP to SSC	76	(24.8)	76	0
	Up to graduation	18	(5.8)	18	0
	Graduation and above	13	(4.2)	13	0
Type of family	Joint	249	(81.4)	247	2
	Nuclear	57	(18.6)	57	0
Occupation	Housewife	241	(78.8)	239	2
	Farm workers	50	(16.3)	50	0
	Self-employed	2	(0.7)	2	0
	Others	13	(4.2)	13	0
Husband's occupation	Farmer	172	(56.2)	172	0
	Self-employed	51	(16.7)	50	1
	Service	27	(8.8)	26	1
	Drivers	18	(5.8)	18	0
	Others	34	(11.1)	34	0
	Unemployed	4	(1.4)	4	0
Husband living away for work	No	236	(77.1)	235	1
	Yes	70	(22.9)	69	1
Husband alcoholic	No	253	(82.7)	252	1
	Yes	53	(17.3)	52	1
Use of condoms	No	302	(98.6)	300	2
	Yes	4	(1.4)	4	0
Past history of STD	No	305	(99.7)	303	2
	Yes	1	(0.3)	1	0
Tattooing	No	63	(20.6)	63	0
	Yes	243	(79.4)	241	2

into remote rural populations. It has been estimated by National AIDS Control Organization that the prevalence of HIV infection in rural female population in the State of Maharashtra, India, might be up to 0.28%.³ This study shows that it is nearly 2½ times higher than this presumed prevalence.

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