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AWARENESS AND KNOWLEDGE OF MOTHER-TO-CHILD TRANSMISSION OF HIV / AIDS AMONG REGNANT WOMEN OF RURAL TERTIARY CARE HOSPITAL

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ABSTRACT

Introduction: Infected mother to child transmission of HIV/AIDS, in absence of any intervention vary from 20-25%. Awareness of the various aspects of this disease deserves the ultimate importance in preventing mother to child transmission of HIV/AIDS. So the study was planned to evaluate awareness and knowledge of mother-to-child transmission of HIV/AIDS and its prevention among pregnant women.

Methods – Present hospital based study carried out at the ANC clinic of rural tertiary hospital. Pretested and predesigned questionnaire was used.

Results - All pregnant women were aware of HIV/AIDS. Among the total respondents 63.13% were aware that HIV/AIDS can co-exist with pregnancy but only 60.5% were aware of mother- to –child transmission. Antiretroviral drugs in pregnancy and avoidance of breastfeeding were identified as methods of preventing mother-to-child transmission of HIV/AIDS by only 46.85% and 15% of the respondents respectively, out of which 53.15% respondents don't know any methods of preventing mother to child transmission of HIV/AIDS.

Conclusion – Health education should be more specifically focused on mother-to-child transmission of HIV/AIDS and its methods of prevention among the pregnant women as the knowledge is superficial.

Keywords: Knowledge, HIV, AIDS and Awareness.

INTRODUCTION

Human Immune Deficiency Virus/Acquired Immune Deficiency Syndrome (Slim Disease) first reported in 1981 has since evolved into a global pandemic with devastating public health and economic consequences, the major brunt of which is borne by sub-Saharan Africa[1]. The overall growth of Human Immunodeficiency Virus/Acquired Immunodeficiency Disease Syndrome (HIV/AIDS) epidemic appears to have stabilized both globally and in India but the rate of new infections is still high [2,3]. Though India is categorized as low HIV prevalence nation, it has the third largest number of people living with HIV/AIDS. There are an estimated 2.39 million people living with HIV/AIDS of which, 39% are females and 3.5% are children with an adult prevalence of 0.31% in 2009[4].

In 2010, around 390,000 children under 15 years became infected with HIV/AIDS , most of these new infections are believed to results from trans-

mission during pregnancy or delivery ,or post – partum as a result of breastfeeding[5] . In absence of any intervention rate of transmission varies from 20-25% . Prevention Of Mother To Child Transmission (PMTCT) is a commonly used term for program and interventions designed to reduce the risk of mother to child transmission (MTCT) of HIV/AIDS. This program entails counseling and testing of pregnant women in the Integrated Counseling and Testing Centre (ICTCs).

Through this program with the efforts of NACO, effective antiretroviral drugs being made available and accessible to pregnant women throughout India. The coverage of services to prevent mother to child HIV transmission ranges from 10% in 2004 to 53% in 2009,resulted in drop in the new HIV infection among the children less than 15 yrs suggest that those efforts are saving lives . To optimize the effectiveness of any intervention, women must have adequate and correct knowledge of HIV/AIDS transmission and available treatments for the prevention. So present study was conducted to evaluate awareness and knowledge of mother-to-child transmission of HIV/AIDS and its prevention among pregnant women .

MATERIAL AND METHOD

Present study is hospital based cross-sectional study conducted during August 2011 to October 2011. Study carried out at the ANC clinic of S.R.T.R. M.C. and rural hospital , Ambajogai. The sample size was calculated from the expression $4PQ/L^2$. Where p- knowledge of mother to child transmission of HIV/AIDS is 70% [6], q is (1-p) = 30% and L is allowable error taken as 10%. Total sample size is 84 with 20% of the non-response error it will be 100. A total of 160 married pregnant women were interviewed during the given period of study. For this study every third newly registered pregnant women (systemic random sampling) before her first ANC check-up in the antenatal clinic (ANC) was enrolled in the study and interviewed if she was willing to participate in a structured interview regarding HIV/AIDS knowledge. Women were eligible for the study if they were married and aged between 18 -44 years . Out of the 640 women approached, 490 women were eligible and willing to participate in the study. Of these women, every third woman (for a total 160) was asked to provide additional information regarding HIV/AIDS knowledge. Data collected by administering pretested and predesigned questionnaire to assess awareness and knowledge of mother-to-child transmission of HIV/AIDS and its prevention among pregnant women. Data was entered in Microsoft excel and analyzed.

RESULTS

Total 160 pregnant women were interviewed for the present study. Table 1 revealed that, age of the study subjects ranged between 18-42 years. Mean age of the study subjects was found to be 23 years. Maximum study subjects 85(53.12%) were in the age group of 21-25 years and 46(28.75%) in the age group of 18-20 years which together constituted about 82% of study subject. It was observed that 29(18.13%) of study subject belonged to age group of 26 yrs and above.

Table no.1 showed that, study subjects who belonged to Hindu religion were 120(75%), Muslim religion 32(20%) and 8(5%) were Buddhist and others. Study subjects who were first, second and third or more gravida were 45(28.13%), 70(43.75%) and 30(18.75%) respectively.

As far as education of the study subjects is concerned ,most of the study subjects were literate .Out of the total study subjects 132(82.5%) educated up to secondary and higher secondary level, 14(8.75%) were graduate , 3(1.88%)% were educated up-to primary school and 11(6.87%) of the pregnant women were illiterate.

Table 1 Socio-demographic characteristics of the study population (n= 160)

Socio-demographic \characteristics	Frequency (n=160) (%)
Age	
18-20 yrs	46 (28.75%)
21-25 yrs	85 (53.12%)
26yrs or more	29 (18.13)
Religion	
Hindu	120 (75%)
Muslim	32 (20%)
Buddhist and others	08 (5%)
Parity	
0	15 (9.37%)
1	45 (28.13%)
2	70 (43.75%)
3 or more	30 (18.75%)
Educational level	
Illiterate	11(6.87%)
Primary	03 (1.88%)
Secondary and higher secondary	132(82.50%)
Graduate	14 (8.75%)

Table 2 shows that, all the pregnant women heard of HIV/ AIDS. Mainly 122 (76.25%) study subjects had the knowledge of HIV/AIDS since less than 5 years. Regarding main sources of information about HIV/AIDS, 76(47.5%) of the study subjects mentioned television as the main source, 53 (33.12%) study subjects mentioned health worker as the main source of their information. News paper &

pamphlets, relative & friends and radio were mentioned as main source of information by 26.25%, 5.6% and 3.13% of study participants respectively.

Table.2 Awareness and Knowledge about HIV/AIDS (n=160)

Awareness and knowledge	Frequency (n=160) (%)
Awareness of HIV/AIDS	
Yes	160 (100%)
No	0 (0%)
Since how long heard of HIV/AIDS	
< 5yrs	122(76.25%)
>5yrs	38 (23.75%)
Total	160 (100%)
Sources of information	
Television	76(47.50%)
Health worker	53(33.12)
News paper & pamphlets	42(26.25%)
Relative & Friends	09(5.60%)
Radio	05(3.13%)
Routes of transmission	
Sexual transmission	160(100%)
Blood transfusion	82(51.25%)
Unsterile needles and injections	68(42.50%)
Infected person appear to be healthy	
Yes	91(56.87%)
No	30(18.75%)
Don't know	39(24.38%)

Table 3: Knowledge about HIV/AIDS and pregnancy (n=160)

Awareness and knowledge about HIV/AIDS	Frequency (n=160) (%)
HIV co-existence with pregnancy	
Yes	101(63.13%)
No	12(7.50%)
Don't know	47(29.37%)
Mother to child transmission	
Yes	97(60.50%)
No	12(8.25%)
Don't know	51(31.25%)
Route of transmission	
Placenta	64(40.00%)
Vaginal delivery	15(9.37%)
Breastfeeding	28(17.50%)
Don't know	68 (42.50%)
Methods of preventing MTCT	
ART in pregnancy	75(46.85%)
Combined ART and no breastfeeding	24 (15.00%)
Don't know	*84(53.15%)*

Table 4: Level of education and knowledge of mother-to-child transmission of HIV (n=160)

Knowledge of MTCT	None & primary (n=14)	Secondary & above (n=146)
Yes	02	96
No	12	49

Chi-square value =13.86, p value=0.0001,df=1

It could be concluded from Table no.2 that, all the study participants mentioned sexual intercourse as the route of transmission of HIV/AIDS. Blood transfusion and sharing of unsterile needles and injections were identified as additional routes of transmission by 82(51.25%) and 68(42.5%) of the study subjects, respectively.

Higher proportion of the respondents 91(56.87%) knew that an apparently healthy person could be living with HIV/AIDS. Out of total participants 30(18.75%) of study subjects reported that, person infected with HIV/AIDS does not appear as healthy person while 39(24.38%) of study subjects don't know whether person of HIV/AIDS appear healthy or sick.

Table no.3 shows that, maximum 101(63.13%) of the pregnant women heard that HIV /AIDS can coexist with pregnancy, but out of them only 97(60.50%) study subject could mentioned that HIV/AIDS transmitted from mother-to-child . It was observed that majority of pregnant women 97(60.5%) who were heard of mother to child transmission of HIV/AIDS, only 64(40%) of respondent mentioned trans-placental as the route of transmission of HIV/AIDS during pregnancy and 68(42.5%) of them don't know about any method of mother to child transmission of HIV/AIDS. However, lower proportion 15(9.37%) and 28 (17.5%) of the study subjects identified Vaginal delivery and breast feeding as additional routes of mother –to-child transmission of HIV/AIDS respectively.

Table no.3 revealed that, more than half of the study subjects 84(53.15%) did not know any methods for prevention of mother-to-child transmission of HIV/AIDS. Use of antiretroviral drugs in pregnancy and avoidance of breastfeeding were heard as methods of preventing mother-to-child transmission of HIV/AIDS by 75(46.85%) and 24(15%) of the study subjects, respectively.

Table no.4 showed that, there was a significant association between knowledge of HIV/AIDS and the educational status of the respondents .With increasing educational level there was good knowledge of HIV/AIDS ($\chi 2=13.86$, $p<0.05$,df=1).

DISCUSSION

In the present study maximum study subjects 85 (53.12%) were in the younger age group i.e. 21-25 years. Similar findings seen in Shrotri A et al (2003)[6] where 609(86%) of the pregnant women were less than 25 years and K.S. Negi et. al.(2006)[7] also showed 193(54.2%) of pregnant women belong to the age group of 20-25 years.

In present study most of the study subjects were literate, 132(82.5%) study subjects educated up to secondary and higher secondary level, 14(8.75%) were graduate , 3(1.88%)% were educated up-to primary school and 11(6.87%) of the pregnant women were illiterate. This study findings were partially similar with Udaykiran U. Bhalge et.al.(2012)[8] which found maximum pregnant women were literate and only 4.66% were illiterate.

All the pregnant women heard of HIV/ AIDS in the present study and the majority also demonstrated knowledge about mode of transmission and the course of HIV/AIDS. This may be attributed to many factors , including high level of literacy among the respondents. Such high levels of awareness have been reported in Delhi [9] and Pune[10] in India and in other parts of the world[11-12] .

Regarding sources of information about HIV/AIDS, in the present study maximum 47.5% of the study subjects mentioned television as the main source. Media campaigns have been quite successful at increasing knowledge and have been the first source of knowledge about HIV/AIDS and similar study finding reported byUdaykiran U. Bhalge et.al.(2012)[8] , Shrotri A et. al.(2003)[6], Patel P B et.al.(2010)[13].

Sexual intercourse was identified as a route of transmission by all the respondents who heard about HIV/AIDS. This agrees with a worldwide trend in which sexual intercourse is the route of transmission mostly known to respondents [9-12]. In the present study blood transfusion and sharing of unsterile needles and injections were identified as additional routes of transmission by 51.25% and 42.5% of the study subjects, respectively. Udaykiran U. Bhalge et.al.(2012)[8] revealed that, maximum 82% of pregnant women mentioned sexual route and 50.66% name the unsterile needles and syringes as the route of transmission of HIV/AIDS .

Maximum pregnant women 63.13% in the present study heard that HIV /AIDS can coexist with pregnancy, but only 60.50% study subject could mentioned that HIV/AIDS transmitted from mother-to-child . It was observed that, 60.5% of pregnant women who were heard of mother to child transmission of HIV/AIDS only 40% mentioned trans-placental as the route of transmission of HIV/AIDS during pregnancy . Udaykiran U. Bhalge et.al.(2012)[8] noted that 50.66% of pregnant women named mother to child transmission of HIV/AIDS. Patel P B et.al.(2010)[13]. reported that, 91% pregnant women aware of mother to child transmission but only 60% identified trans-placental as route of mother to child transmission of HIV/AIDS also 21% of the pregnant women didn't know route for mother to child transmission of HIV/AIDS. Other routes for mother to child transmission of HIV/AIDS as identified by respondents were caesarian section, vaginal delivery breast feeding by 40%, 41% and 53% of respectively. In the present study 42.5% of respondent don't know about any method of mother to child transmission of HIV/AIDS. However, a significantly lower proportion 15(9.37%) and 28(17.5%) of the study subjects identified Vaginal delivery and breast feeding as route of mother –to-child transmission of HIV/AIDS respectively.

More than half of the study subjects of present study 53.15% did not know any methods for prevention of mother-to-child transmission of HIV/AIDS. Use of antiretroviral drugs in pregnancy and avoidance of breastfeeding were heard as methods of preventing mother-to-child transmission of HIV/AIDS by 75(46.85%) and 24(15%) of the study subjects, respectively. Trupti N bhodare et. al.(2014)[14] found majority 93% of the respondents were aware that MTCT of HIV can be prevented. Avoidance of breastfeeding was the most

frequently mentioned strategy by 64.51% respondents, followed by maternal ARV prophylaxis by 56.45% and caesarean section by 40.32% of the respondents. Vijay Shree et.al.(2015)[15] found the level of complete knowledge about HIV/AIDS is very low among the married pregnant women, although majority 80 % of the women had heard about HIV/AIDS and knew some aspects of it, the knowledge about MTCT was very sparse.

Udaykiran U. Bhalge et.al.(2012)[8] found a large number of respondents did not know that breastfeeding is associated with risk of transmission of from mother to child (MTCT) or antiretroviral medication reduced the risk of MTCT. Patel P B et.al.(2010)[13] revealed that, more than half of the women in the study did not know of any method of preventing mother-to-child transmission of HIV. Avoiding breastfeeding was identified by 24% of the respondents as a means of preventing transmission from mother to child, while only 6.2% of the respondents mentioned cesarean section as a method of preventing mother-to-child transmission of HIV. Similarly low levels of awareness and knowledge about prevention of mother to child transmission of HIV/AIDS have been reported in other studies [6,16]

In present study, significant association found between knowledge of HIV/AIDS and the educational status of the respondents ($\chi 2=13.86$, $p<0.05$,df=1). K.S. Negi et. al.(2006)[7] found that literate respondents were having more awareness about HIV/AIDS . Vijay shree et.al.(2015)[15]. revealed the relationship of education with the awareness regarding HIV / AIDS was not found to be statistically significant.

This study provides baseline information about knowledge of mother-to-child transmission of HIV and its prevention among pregnant women of rural area .However, the women were mostly married. In our environment, the opinion of the male partners strongly influences the uptake of health policies and programs by women. Thus, a more further research study should be conducted for assessment of knowledge and awareness for prevention of mother-to-child transmission of HIV/AIDS also requires the participation of men.

CONCLUSION

This study demonstrates a low level of awareness of mother-to-child transmission of HIV among pregnant women in the rural hospital area.

RECOMMENDATIONS

To increase the level of awareness about maternal to child transmission among the pregnant women counseling should be focused on the specific routes of mother- to-child transmission and various interventions available to prevent mother-to-child transmission

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