



Awareness Regarding Mother to Child Transmission of HIV among Antenatal Patients Attending Antenatal Clinic in a Tertiary Medical Hospital, Bangalore

Authors

Dr Harshadayani¹, Dr Jagadevi², Dr Padmashri³

¹Intern Student, ²Senior Resident, ³Professor and Head of Department

Department of Obstetrics and Gynecology

Sapthagiri Institute of Medical Science And Research Centre, Bangalore

ABSTRACT

Introduction: *In India due to lack of information ,testing services and antiretroviral therapy HIV continues to be a problem.1-4 Prevention of MTCT of HIV requires a comprehensive set of interventions requiring health workers.6-7 It starts with testing pregnant women for HIV preferably during their first antenatal visit when giving their test results .8-9*

Aim: *Evaluation of Awareness of perinatal transmission of HIV to newborn baby among antenatal mothers attending ANC clinic.*

Objective: *To assess knowledge regarding mother to child transmission of HIV among antenatal patients.*

Material and Methods: *Study design- It is a cross sectional study.*

Study area- *Tertiary care hospital.*

Sampling method- *Non probability convenience sampling.*

Population - *All pregnant women seeking for antenatal checkup, were interviewed, study was conducted for a period of 3 months.*

Method of data collection- *Interview method is used using a semi standardized pretested questionnaire.*

Result: *Our study shows that majority of antenatal women had good knowledge and awareness about the disease and its occurrence in pregnancy. Most were aware of sexual transmission was main route of transmission in adults with media playing major role as source of knowledge. Awareness about mother to child transmission of HIV and their prevention was low.*

Conclusion: *Our study shows that awareness about HIV in pregnancy in a semi urban area is high but knowledge and awareness about mother to child transmission of HIV is low.*

Keywords- *awareness, HIV, mother to child transmission ,Antenatal patients, prevention.*

INTRODUCTION

Globally 40 million people were living with HIV in the year of 2016 which is 1% of population.¹⁻³

In India due to lack of information, testing services and antiretroviral therapy HIV continues

to be a problem.⁴ More than 90% of children who are retro positive aged less than 15 years are due to mother to child transmission.⁵ In developing countries mother to child transmission is responsible for 5 to 10% of total number of HIV.⁶

The risk of mother to child transmission can be reduced by prevention of unwanted pregnancy , new infection and awareness about mother to child transmission in HIV infected women .⁷

Our study is intended to assess awareness among antenatal patients about mother to child transmission of HIV.

REVIEW OF LITERATURE

A descriptive study was conducted on 666 women seeking prenatal care at 9 medical facilities in Chennai and Mysore in India, to assess their attitudes towards prenatal HIV testing and antiretroviral prophylaxis for preventing perinatal HIV transmission if needed. 76% of antenatal were aware of the risk of perinatal HIV transmission and 36% knew that intervention could reduce the chances of such transmission. 86% would agree to undergo prenatal HIV testing but only 21% of all antenatal mothers would make this decision independently while 46% said their husband would have to decide ⁸.

A descriptive study was conducted in north western china with a population of 2 million. Out of total 290 pregnant women in their study they had limited knowledge about MTCT of HIV with several misconception. Awareness about HIV as sexually transmitted was well known but stigma remains high among high risk patients. The study implicated that it was important to provide information about HIV and its stigma to antenatal women in north western china.⁹ A descriptive study was conducted at the pediatric HIV clinic of Amiu Kano . Out of total 164 mothers the level of knowledge about HIV/AIDS among mothers was very high (100%) .Out of which 91% of mothers were aware of Mother-to-child transmission of HIV. Transplacental route (41%) was the most common route of transmission. The level of knowledge and perceptions of Mother-to-child transmission of HIV was inadequate. The study concluded that there was a need to scale up education about Mother-to-child transmission of HIV in the health facilities ¹⁰.

A cross sectional survey was conducted in Kep district of Cambodia in ten different villages among adults between the ages 18 to 58 years to assess the HIV/AIDS-related knowledge. The majority of respondents had an accurate knowledge about the modes of transmission and method of prevention of HIV but their understanding regarding mother-to-child transmission was low.¹¹

A descriptive study was done to evaluate the Prevention of Mother-to-child transmission of HIV in Temeke district of Tanzania. The result showed that 68.1% of the participants had already had HIV testing but 31.9% had not. General knowledge of the participants about HIV was high, but specific knowledge of mother- to-child transmission was relatively low. ¹²

A cross sectional study was conducted to evaluate the knowledge on mother-to -child transmission of HIV and its prevention among pregnant women attending antenatal clinic of a federal medical Centre in Ekiti State in Nigeria. The majority (90%) of the women were aware that HIV/AIDS can coexist with pregnancy, but only 68% were aware of mother-to-child transmission. Transplacental route, vaginal delivery and breastfeeding were identified as routes of transmission from mother to child by 65%, 38% and 52% of respondents, respectively. Caesarean section was believed to be a route of transmission by 43% of women, but only 3% identified caesarean section as a method of prevention of mother-to-child transmission. The results suggested that though the level of awareness of HIV/AIDS among women attending their antenatal clinic was high, the level of knowledge about mother-to-child transmission was inadequate.¹³

A cross sectional study was conducted in Tehran, Iran to evaluate the knowledge of women about HIV and its vertical transmission and prevention among 1577 pregnant women aged 15 - 46 years. 16.5% of the participants had good knowledge about HIV/AIDS and 54.1% about its transmission routes but awareness about its prevention was only 5.7%. 57% of the participants

were not tested for HIV earlier and 20.2% were not willing to undergo such tests. About 86.2% of the participants had no idea about the availability of drug prophylaxis. The fact that 20.2% of the participants were not willing to undergo HIV testing reflects negative attitude about HIV infection. Although the overall awareness about the infection and its transmission was good, the knowledge about its prevention by prevention of mother-to-child transmission services and its availability was low.¹⁴

AIM

Evaluation of Awareness of perinatal transmission of HIV to newborn baby among antenatal mothers attending ANC clinic.

OBJECTIVE

To assess knowledge regarding mother to child transmission of HIV among antenatal patients.

METHOD AND MATERIAL

Study design- It is a cross sectional study.

Study area- Tertiary care hospital.

Sampling method- Non probability convenience sampling.

Population -All pregnant women who are coming to OBG department seeking for antenatal checkup for a duration of 3 months were interviewed.

Method of data collection - Interview method used using a semi standardized pretested questionnaire.

We explained about purpose of our study in their local language to facilitate better communication and volunteering. Volunteered ANC mothers were interviewed after taking oral consent from them.

Inclusion criteria: all antenatal patients between 19 to 40 years.

Exclusion criteria: < 19 years, > 40 years.

RESULT

Our study shows that out of 315 ANC women majority 310(98.4%) were aware about disease, 5 (1.6%) were not aware. Major source of

information was the media 124(39.3%) by friends and relatives 77(24.5%), by hospital and health care workers 74(22.7%) and others 44(13.5%). Majority knew sexual transmission as the main route of transmission accounting for 135(42.9%), followed by injections 48(15.8%), blood transfusion 47(14.8%), breastfeeding 42 (13.3%), vaginal delivery 23(7.3%) and caesarean section 18(5.7%) respectively .HIV/AIDS was thought to be most common among multiple sexual partners 200 (63.5%) and commercial sex workers 68 (34.7%) , followed by IV drug abusers 38(12.1%). Of 315 ANC women 290 (92.1%) wished to have HIV test, 25(7.9%) were not interested. Majority 270(85.7%) were aware about the occurrence of HIV in pregnancy and 58(18.4%) aware of mother to child transmission but 45(14.3%) were not aware about occurrence of HIV in pregnancy and 257(81.6%) were not aware about mother to child transmission of HIV. 214(67.9%) were not aware about the methods to prevent mother to child transmission of HIV while, 69(22.9%) of women thought to avoid breastfeeding and rest 32(10.1%) opted for caesarean section. Majority of women 265(84.1%) were aware about the tests available to detect HIV and 257(87.3%) had already got tested but 50(15.8%) were not aware of the tests and 40(12.7%) did not have the tests. 168(53.3%) of antenatal women were not aware about the need for HAART and its significance but 147(46.7%) were aware about its significance. 167(53%) knew where centers for ICTC are present and 148(47%) mentioned that they had not heard about it. 238(75.6%) mentioned that the rate of pregnant women with HIV is more in cities than 77(24.5%) in rural area because of their lifestyle and behavior. 207(65.7%) thought that the present rate of mother to child transmission of HIV is increasing, 50(15.9%) decreasing and 58(18.4%) same as before. 257(81.6%) do not have any family members with AIDS while 25(7.9%) did not want to disclose and 33(10.5%) had family members who were infected. 215(68.3%) were willing to inform other hospital staff if test comes positive, 39 (12.4%) were not

willing and 61(19.4%) did not know. 269(85.4%) were willing to tell their husbands if test comes positive, 13140 (44.4%) were ready to shorten the duration of breastfeeding to less than six months to reduce transmission to their child, 112 (35.6%) were not ready and 63(20.6%) didn't know. 159 (50.5%) did not want to have more children if test comes positive 77(24.4%) wanted more children and 79(25.1%) didn't know. Majority belong to 19-24 accounting for (50.8%) and 25-30 (39.7%) followed by 31-35 and 36-40 which was (8.9%) and (.6%) respectively. A total of 193(61.3%) belonged to rural and rest 122(38.7%) belong to urban area. Majority studied up to secondary school (45.1%) followed by university, college, illiterate which was (23.8%),(18.7%),(12.4%) respectively. Married women are 301(95.6%) and single women 14(4.4%) 247(78.6%) of women are housewives and others 68(21.6%) are working outside.

DISCUSSION

In our study media 124(39.3%) were the main sources of information about HIV/AIDS. In Sevanan Murajan et al (2010)²⁹ 194(64.6%) television was the main source of information about HIV. In our study a substantial number of women also reported having had conversation with others about HIV/AIDS most frequently with friends and relatives (24.5%) but also with health and education professional (22.7%) and others (13%). Lal P et al(2008)³¹ studied 79.6% mentioned television and radio were the main sources of information to them. In the present study 135(42.9%) mentioned sexual route, 14.8% and 15.8% name blood transfusion and needles as mode of transmission, 13.3% breastfeeding, 5.7% caesarean and 7.3% vaginal delivery as route of transmission. This is comparable with Lal p et al (2008)³¹ only 48.2% could name sexual route while 44.4% mention sharing of needles and syringes as mode of transmission. Only 31.1% and 23.4% cited blood transfusion and mother to child transmission as route of transmission respectively. Majority 85.9% of the women were aware that

HIV infection could coexist with pregnancy but very low proportion (63.2%) of respondents were aware of mother-to child transmission of HIV. This shows their poor knowledge of MTCT HIV inspite of good knowledge about its coexistence with pregnancy. The study also reveals that illiterate or literate up to primary level respondents had poor knowledge about mother-to-child transmission of HIV while 87.6% literate had good knowledge about mother to child transmission. This statistically significant relationship between the level of education and knowledge of HIV was also found in Bassey et al (2009)³² and could partly be explained by the fact that highly educated people usually have more access to information including that on HIV. In India and other developing countries, breastfeeding is given more importance culturally and exclusive breastfeeding for six months is advocated this reduces high infant mortality and morbidity from diarrheal diseases and malnutrition. This can be encouraged by providing milk substitutes free of cost by both government and non government agencies. In our study 50.5% of ANC mothers did not want to have children in the future and 24.4% wanted to have children in future. The desire to have child was much lower 24.4% compared to 70% of pregnant mothers expressing their desire to have children (Ezeanoule et al., 2006) which shows their better awareness. In our study majority 160(50.8%) women belongs to 19-24 years age group, 125(39.7%) belongs to 25-29 years age group and 28(8.9%) belongs to 30-34yrs and (.6%) belong to 35-40yrs. Majority were below 25 years. This was comparable with Shrotri A et al (2003)³⁰ i.e. 45(30.00%) women belongs to 18-20 years age group, 81(54.00%) belongs to 21-25 years age group and 24(16.00%) belongs to 26 and above years age group. Out of 315 ANC women 247(78.4%) were housewives and 68(21.6%) belong to other occupation. In Shrotri A et al (2003)³⁰ out of total 707 women 584 (83%) were housewives and 123(17%) belongs to other occupations. In the present study out of 315 ANC

client 29(9.2%) were having education up to Primary school, 142(45.1%) studied up to secondary school, 134(42.5%) studied up to Higher secondary above and 10(3.2%) were illiterate. The finding were similar with Shrotri A et al (2003)30out of 707, 230(33%) were educated up to illiterate/primary, 477 (67%) were educated up to secondary and above. This shows that education plays very important role in their knowledge about HIV .For community education, a public media campaign should stress more on the aspect of prevention of mother-to-child transmission. There is also the need for increased collaboration with HIV prevention programs.

TABLE 1

	Frequency = n	Percentage %
Q1-Heard about HIV		
Yes	310	98.4
No	2	.6
Don't know	3	1
Total	315	100
Q2-Source of information		
media	124	39.3
Friends	77	24.5
Relatives	74	22.7
others	41	13
total	315	100
Q3-Route of transmission		
Vaginal	23	7.3
Caesarean section	18	5.7
Breastfeeding	135	42.9
Sexual route	42	13.3
Blood transfusion	47	14.8
Injections	48	15.8
Total	315	100
Q4-Population most commonly affected		
Men having sex with men	9	2.8
Multiple sexual partner	200	63.1
IV drug abusers	38	12.1
Commercial sex worker	68	34.7
Total	315	100

TABLE -2

Q5-Wish to find HIV in blood	frequency=n	percentage=%
Yes	290	92.1
No	25	7.9
Total	315	100
Q6-Aware of occurrence of HIV in pregnancy		
Yes	270	85.7
No	19	6
Don't know	26	8.3
Total	315	100
Q7-Aware about MTCT		
Yes	199	63.2
No	58	18.4
Don't know	58	18.4
Total	315	100
Q8-Aware about MTCT prevention		
Caesarean section	32	10.1
Avoid breastfeeding	69	22.9
Don't know	214	67.9
Total	315	100

TABLE 3

Q9-Aware about tests for HIV	frequency=n	%
Yes	265	84.1
No	19	6
Don't know	31	9.8
Total	315	100
Q10-Already got tested		
Yes	275	87.3
No	40	12.7
Total	315	100
Q11-Aware about need for HAART		
Yes	147	47.6
No	87	27.6
Don't know	81	25.7
Total	315	100
Q12-Aware about where ICTC is present		
Yes	167	53
No	106	33.7
Don't know	42	13.3
Total	315	100

TABLE-4

Q13-HIV in pregnancy	frequency=n	percentage=%
More in city	238	75.5
More in rural	77	24.5
Total	315	100
Q14-Rate of HIV in pregnancy		
Increasing	207	65.7
Decreasing	50	15.9
Same	58	18.4
Total	315	100
Q15-Family/friend with HIV		
Yes	33	10.5
No	257	81.6
Don't know	25	7.9
Total	315	100
Q16- Inform hospital staff if HIV positive		
Yes	215	68.3
No	39	12.4
Don't know	61	19.4
Total	315	100

TABLE-5

Q17-Will you inform husband if you tested HIV positive	frequency=n	percentage=%
Yes	269	85.4
No	13	4.1
Don't know	33	10.5
Total	315	100
Q18- Will you Shorten duration breastfeeding to avoid transmission		
Yes	140	44.4
No	112	35.6
Don't know	63	20
Total	315	100
Q19-Want to have more children even if HIV positive		
Yes	77	24.4
No	159	50.5
Don't know	79	25.1
total	315	100

TABLE-6 Sociodemographic Character

Q20-Age	frequency=n	percentage=%
19-24	160	50.8
25-30	125	39.7
31-35	28	8.9
36-40	2	.6
total	315	100
Q21-Place		
Rural	122	37.7
Urban	193	61.3
Total	315	100
Q22-Education		
University	75	23.8
College	59	18.7
Secondary	142	45.1
Illiterate	39	12.4
Total	315	100
Q23		
Married	301	95.6
Single	14	4.4
Total	315	100
Q24-Occupation		
Housewife	247	78.4
Others	68	21.1
Total	315	100

Implication

In order to reduce vertical transmission of HIV to infants who play a major part of futures health of society there should be increase in the number of counselling centers and health workers especially in rural and semi urban areas to reduce misconception, specific awareness programmes to be implemented by government free of cost for a healthy future.

CONCLUSION

Our study shows that awareness about HIV in pregnancy in a semi urban area is high but knowledge and awareness about mother to child transmission of HIV is low. This study shows the

stigma and lack of awareness about the significance of vertical transmission of HIV among antenatal mothers for which immediate measures has to be taken by both government and health care organization which is both easily accessible and affordable for the betterment of the future.

REFERENCES

1. Laval B O. HIV/AIDS awareness among secondary school teachers in Kwara logos and agun states of Nigeria. *European Journal of scientific research*.22 (3), 2008,339-410.
2. Park K. *Textbook of Preventive and Social Medicine*. 21th edi. M/s Banarasidas Bhanot publishers; 2011 .
3. UNAIDS(2016) global HIV/AIDS response;e pidemic update and health sector progress towards universal access; progress report november 2016.world health organisaton ,Geneva 233.
4. Joint United Nations Programme on HIV/AIDS (UNAIDS).Report on the global AIDS epidemic 2016.Available from; http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2016/2016_Global_report.aspx [accessed on 2016 November].
5. National AIDS Control Organisation (NACO). Annual HIV Sentinel Surveillance Country Report 2006. Available from: <http://www.nacoonline.org/upload/> [accessed on 2010 Mar 16]. No Author, 50 Lakhs Indians HIV positive. *The Tribune* Jan 10, 2005.
6. Dalar AR. prevention of mother to child transmission of HIV/AIDS infection . *Journal of obstetric and gynecology of India* ,2001;51:25-27.
7. McIntyre J, Glenda G. What can we do to reduce mother to child transmission of HIV? *British Medical Journal* 2002; 324: 218-220.
8. Brown H, Vallabhaneni S, Solomon S, Mothi S, McGarvey S, Jackson T, Putcha M, Burner S, Mate K and Cu-Uvin S. 2001. Attitudes towards prenatal HIV testing and treatment among pregnant woman in southern India. *International Journal of STD & AIDS* 2001;12:390-394 doi 10.1258/0956462011923345.
9. Maimiti R., Anderson R. Awareness and Attitude About HIV Among Pregnant Women in Aksu, Northwest China. *The Open AIDS Journal* 2008; 2:72-77.
10. Adeleke S.I., Mukhtar-Yola M., Gwarzo G.D. Awareness and knowledge of mothers attending the pediatric HIV clinic, Kano, Nigeria. *Annals of African Medicine* 2009 (4) 210-214.
11. Ho EY and Grewal S. HIV/AIDS-Related Knowledge, Attitudes, and Practices of a Rural Community in Kep, Kingdom of Cambodia. *Univ Tor Med J*. 2005 Mar;82(2):82-87.
12. Kominami M., Kawata K., Ali M., Meena H., Ushijima H. 2007 , “ Factors determining parental HIV testing for prevention of mother to child transmission in Dar Salaam, Tanzania *Pediatrics international* volume49,issue 21,pages 286-292 Blackwell publishing Asia. <http://www3.interscience.wiley.com/journal/118514482/abstract>
13. Moses O. Abiodun, Munir’deen A, and Peter A. Aboyeji. Awareness and Knowledge of mother-to-child transmission of HIV among pregnant women. *J Natl Med Assoc*. 2007 July; 99(7):758-763.
14. Richad H. 2009. *Virology – Chapter Seven Part Five. Human Immunodeficiency Virus and Aids Statistics*. <http://pathmicro.med.sc.edu> .
15. Sandgren E, Sandgren S, Ueazalin M, Andersson R. HIV/AIDS awareness and risk behavior among pregnant women in Samey, Kaazakhstan,2007. *BMC Public*

Health.2008; 8: 295 doi 10.1186/1471-PMC 2543023.

17. MurajanS,Saberrimuthis, Pongiya V, Desigan CG. Awareness about HIV/AIDS among adolescent boys in tribal villages of nilgiri district south India. Humanity and social sci. J; 5(1):63-67.
18. Lal P, NathA,bandhanS , IngleGK. The study of awareness about HIV/AIDS among senior secondary school children of Delhi. Indian journal of community medicine, 33(3), 2010,190-192.
19. Bassey E.A.,Abasiubang F, Ekanem U, Abasiatai. Awareness and knowledge of HIV/AIDS at booking among antenatal clinic attendees in UYO ,Nigeria Int.J.med.med.sci.,1(8),2009,334-338.