

A STUDY ON PREVALENCE OF HIV INFECTION AMONG PREGNANT WOMEN ATTENDING ANTENATAL CLINIC IN AUTONOMOUS STATE MEDICAL COLLEGE, BAHRAICH, INDIA

Gynaecology

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ABSTRACT

Introduction: Prevalence of HIV infection in the pregnant women attending Antenatal clinic (ANC) in socio-economic backward areas are high. The adult HIV prevalence at national level has continued its steady decline but the socioeconomically backward areas are still showing the inclining trends.

Material And Methods: This is a retrospective hospital based descriptive study which includes 1996 pregnant women, attending antenatal clinic (ANC) of ASMC&ATHs, Bahraich. Data was collected from ICTC centre and PPTCT centre of medical college with assurance that data collected only for research purpose and complete confidentiality will be maintained.

Results: Out of 1996 pregnant women, 9 were found to be seropositive for HIV test. Among the study subjects majority were in the age group of 26-30 years (84.61%) followed by Group-I (7.16%), III (6.16) & IV (2.05%) respectively. About 56.76% rural and 43.23% urban population were detected on study subjects.

Conclusion: The reproductive age groups are more prone to HIV infection. Proper knowledge about HIV testing and mode of transmission along with the major contraceptive precautions should be imparted to teenagers. There is requirement of well trained staff, counselor and ANC worker to control the HIV dissemination through properly guiding about the safer sex to the women attending ANC.

KEYWORDS

HIV, Seroprevalence, ANC.

INTRODUCTION

AIDS (Acquired Immunodeficiency Syndrome) caused by Human Immunodeficiency Virus (HIV) is a major threat to the global health and development. The first AIDS case was detected in India in 1986 and since then HIV infection has been reported in all states and union territories. India launched a National AIDS Control Program in 1987. As per 2015 HIV estimation report, the adult (15-49 years) HIV prevalence was estimated at 0.26% (Male-0.30% and Female-0.22%) in 2015 in India. The adult HIV prevalence at national level has continued its steady decline from an estimated peak of 0.38% in 2001-03 through 0.34% in 2007 to 0.26% in 2015^[1,2]. Similar consistent declines were noted among men and women at the national level. Among the States/UTs, in 2015, Manipur has shown the highest estimated adult HIV prevalence (1.15%), followed by Mizoram (0.80%), Nagaland (0.78%), Andhra Pradesh & Telangana (0.66%), Karnataka (0.45%), Gujarat (0.42%) and Goa (0.40%). Besides these States, Maharashtra, Chandigarh, Tripura and Tamil Nadu have shown an estimated adult HIV prevalence greater than the national prevalence (0.26%), while Odisha, Bihar, Sikkim, Delhi, Rajasthan and West Bengal have shown an estimated adult HIV prevalence in the range of 0.21- 0.25%. All other States/Union Territories have adult HIV prevalence below 0.20%^[3].

As HIV infections in women occur primarily during their reproductive years, pregnancy provides a unique opportunity for implementing HIV infection prevention strategies in women. Screening in antenatal women is important, because HIV can be transmitted from an infected mother to her child during pregnancy, labour and delivery and through breast feeding. Reported transmission rates ranged from 13-32% in industrialized countries and 25-48% in developing countries^[1]. In breast feeding infants up to 20% may acquire HIV through breast feeding depending on the duration of breast feeding and other risk factors such as presence of mastitis, breast abscess and other local factors^[4]. In children less than 15 years mother to child transmission is by far the most significant route of transmission of HIV infection^[5]. While heterosexual contact is the commonest mode of spread in this country, perinatal transmission accounts for 4% of total HIV infection load in India^[6].

This study was done to determine the seroprevalence of HIV in pregnant women attending antenatal clinic at Autonomous State Medical College and Hospital, Bahraich, UP, India.

MATERIAL AND METHODS:

Study Design: This is a retrospective hospital based descriptive study which includes 1996 pregnant women, attending antenatal clinic

(ANC) of Autonomous State Medical College and Associated Teaching Hospitals, Bahraich, over a period of 6 months, i.e., from March 2019 to August 2019. Data is collected from ICTC centre and PPTCT centre of medical college with assurance that data collected only for research purpose and complete confidentiality will be maintained. Pregnant women registered at antenatal clinic of this hospital were routinely advised to undergo HIV screening. Blood sample was collected after pretest counseling and informed consent by the study subjects. The samples were tested for HIV antibodies as per NACO guidelines being the first Rapid card test and ELISA as confirmatory antibody test. If the initial result is positive, it is confirmed using two other supplemental tests. After confirming the HIV test results, post test counseling was done and the results were declared. Confidentiality of data was maintained at all the time. Proper antenatal care was given. Hospital delivery was advised for them following universal precautions. All the essential information was collected from the pregnant women by interviewing them. The variables parameter included were age, marital status, occupation etc. Data was collected; compiled and analyzed.

RESULTS

A total of 1996 pregnant women were included in present study, out of which 9 were found to be seropositive for HIV test. Among the study subjects majority were in the age group of 26-30 years (84.61%) followed by Group-I (7.16%), III (6.16) & IV (2.05%) respectively (Table-1). Approximately, 13.02% were illiterate, 41.88% & 39.17% had primary and secondary educational qualifications respectively whereas, 5.91% had higher education. About 56.76% rural and 43.23% urban population were detected on study subjects. Out of total pregnant women, approximately 74.08% were primigravida and 25.95% multigravida (Table 2).

Table 1: Age Wise Distribution Of Pregnant Women Tested For HIV.

AgeGroup(Years)	No. of pregnant women(n=1996)	Percentage
20-25(Group-I)	143	7.16
26-30(Group-II)	1689	84.61
31-35(Group-III)	123	6.16
36-40(Group-IV)	41	2.05

Table 2: Category Wise Distribution Of Pregnant Women Attending ANC For HIV Test (Total Subjects= 1996)

Category	Sub-category	Number	Percentage
Literacy	Illiterate	260	13.02
	Primaryeducation	836	41.88

	Secondary education	782	39.17
	Higher education	118	5.91
Locality	Rural	1133	56.76
	Urban	863	43.23
Gravida	Primary	1478	74.08
	Multi	518	25.95

Out of 09 seropositive pregnant women, Group-I (26-30 years; 67%) has the highest percentage of seropositive pregnant women, followed by Group-II (22%) & III (11%) respectively. (Fig. 1).

Taking into consideration the profession of the seropositive subject husband's, which have been categorized into four groups, i.e. Labor, Truck driver, shopkeeper & unemployment, the highest percentage of seropositive cases were observed in wives of labor and truck driver (33% each) followed by shopkeeper & unemployed individuals (17% each). (Table-3)

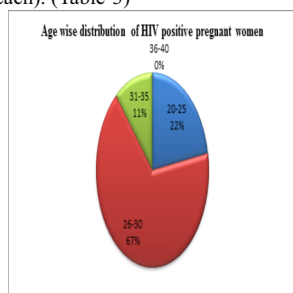


Figure- 1:Age-wise Distribution Of Seropositive Pregnant Women.

Table- 3: Distribution Of Seropositive Pregnant Women According To Husband's Occupation.

HUSBAND'S OCCUPATION	NO.OF HIV POSITIVE WOMEN (n=6)	PREVALENCE RATE
LABORS	2	33
SHOPKEEPER	1	16
TRUCKDRIVER	2	33
UNEMPLOYED	1	16

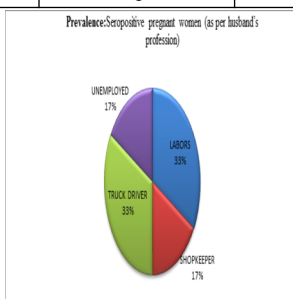


Figure-2:Distribution Of Seropositive Pregnant Women According To Husband's Occupation.

Table - 4: Route Of HIV Transmission In Seropositive Women:

Sl.No	Route of Transmission	No.of Seropositive women	Percentage
1	Sexual Intercourse	6	67
2	Blood Transfusion	1	11
3	Needle Prick	0	0
4	Mother to baby	0	0
5	Unknown	2	22

Maximum seropositive female (67%) delivered their babies after full term of pregnancy; one underwent termination of pregnancy after thorough examination of fetus whereas two patients were not willing to deliver. (Table - 5)

Table-5: Outcome Of Pregnancy:

Outcome of pregnancy	No. of cases
Full Term Delivery	6
Spontaneous Abortion	0

Induced Abortion	1
Undelivered	2

DISCUSSION

Present research work was carried out to study the prevalence of HIV infection among pregnant women attending the antenatal clinic (ANC) of ASMC & ATHs Bahraich, Uttar Pradesh. Data obtained from pregnant women during a period of six months, i.e. from March 2019 to August 2019 were analyzed to find out the prevalence of HIV in women attending ANC. The prevalence observed in this densely demographic Bahraich region was quite high (0.45%) in comparison to other part of the socioeconomic backward areas. Similar studies done by Giri et al., (2012) and Patil et al, (2016) at Maharashtra observed the prevalence of HIV as 0.41% and 0.44% respectively [7,8,9]. While a study by Gupta et al., (2007) done in North India revealed that the prevalence of HIV was found to be 0.88% [10,11]. A study conducted by Khokar et al., (2015) at tertiary care Hospital, Gujarat, observed prevalence of HIV as 0.39% [12,13].

The prevalence of other studies is as follows:

Name of the author	Year of study	Place of study	Prevalence
Kulkarni et al [5]	2013	Maharashtra	0.76%
Sarkate et al [6]	2015	Maharashtra	0.88%
Preethkanwal et al [7]	2016	Punjab	1.03%
Hussain et al [8]	2016	Agra	5.77%

As per National AIDS control organization (NACO) guidelines 2017-2018, the HIV prevalence among the female in reproductive age group was found to be 0.22% in India in 2015. It has mentioned that there is a steady declining trend of HIV infection among the child bearing age group in recent times from a peak of 0.38% prevalence rate in 2001-03, 0.34% in 2007 to 0.26% in 2015. Our research data shows higher prevalence rate (0.45%) compared to the national wide data. It has been observed in the current study that Group-II (26-30 years) is prone to HIV infection with a prevalence rate of 1.39% followed by Group-III (0.81%) and Group-I (0.36%) respectively.

Table - 6: Socio-demographic Factors Of Seropositive Pregnant Women:

Socio-demographic factors	No. of Seropositive cases (09)	Percentage
Occupation		
Housewives	09	100%
Employed	00	0%
Education		
Illiterate	06	66.66%
Literate	03	33.33%
Gravida		
Primi	07	77.77%
Multi	02	22.22%

Among the total seropositive pregnant women, only 33.33% had primary educational qualification whereas, 66.66% were illiterate and didn't have any clue about the disease. Present study shows that illiteracy rate is one of the major causes of spreading of HIV, which is seriously an alarming scenario of this region. The studies carried out by Patil et al in 2016 observed 21.7% and Poonam et al, a study carried out in Akola, Maharashtra in 2017 observed only 8.3% illiteracy rate among seropositive pregnant women which is contrary to our study.

Also, it was observed that majority of seropositive cases were Primigravida (77.77%) whereas 22.22% were multigravida, which coincides with the study of Verma et al (2002), Das et al (2012) and Patil et al (2017). It is to be noted that among the seropositive pregnant women none were employed as shown in Table - 6.

This study has crucial implications to improve HIV testing coverage among the pregnant women in nearby endemic areas. Also, the data indicates high uptake of HIV testing especially among the age group (26-30 years), Group-II. Another important finding of this research work is to highlight the transmission of HIV infection from pregnant mother to child and this can be avoided by encouraging them to attend ANC and having done the test for HIV. Approximately, 02 seropositive pregnant women participants decided not to deliver whereas 01 pregnancy was terminated, remaining 06 underwent full

term delivery in present research.

As expected, the route for HIV transmission among pregnant women is maximum through sexual intercourse (67%) followed by unknown reasons (22%) & blood transfusion (11%) respectively. The low socio-economic status, no education, inadequate knowledge about HIV, communication gap and unemployment are important factors that contribute to the HIV transmission.

CONCLUSION

Although non-pregnant women are at higher risk of HIV infection but the pregnant women not attending ANC are equally at risk of transmitting the disease to fetus because of minimally accession of ANC, reasons being poverty, illiteracy, lack of HIV awareness and low socio-economic status. Above findings are quite crucial in the view that the data of attending pregnant women could be an alarming factor to those of non-attending ANC and to encourage the under-served pregnant women for HIV test done compulsively as it is equally important to overcome the transmission of HIV infection from mother to child and stop the spreading of HIV infection. Also, the reproductive age groups (26-30 years) are more prone to HIV infection as they are sexually active group. Juvenile groups are more prone to HIV infection as virus can propagate easily because of rupture of epithelial layer of vaginal walls due to immaturity during sexual intercourse. Also there is requirement of increase awareness about HIV-AIDS endemic in rural areas where majority of population is illiterate and orthodox, social stigma where parents are unwilling to impart sex education to adolescents. There is requirement of well trained staff, counselor and ANC worker to control the HIV dissemination through properly guiding about the safer sex to the women attending ANC. Proper knowledge about HIV testing and mode of transmission along with the major contraceptive precautions should be imparted to child bearing age groups as well as teenagers.

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