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ORIGINAL ARTICLE

EVALUATION OF HIV TESTING STATUS AND ITS POSITIVITY IN PREGNANT WOMEN IN RAJASTHAN STATE IN THE YEAR 2011-12

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ABSTRACT: BACKGROUND: Parent to child transmission is the most important source of HIV infection in pediatric age group. Ante-natal, natal and post natal periods are crucial time for transmission of Human Immune-deficiency Virus infection from mother to child. **OBJECTIVE:** There are about 1.9 million expected pregnancies in a year in Rajasthan. With HIV prevalence rate amongst women attending ANC services is 0.19% (HIV sentinel surveillance report of 2008) a large number of pregnant women are expected to be HIV positive. There is about 30% a high rate of risk of HIV transmission from HIV infected mothers to their children. By ensuring safe delivery with mandatory services and preventive measures this transmission can be stopped. Therefore testing and counseling of every pregnant women for Human Immuno-deficiency Virus (HIV) / Acquired Immuno Deficiency Syndrome (AIDS) is of vital importance to forestall spread of HIV infection by this route. **MATERIAL AND METHODS:** Present study is carried out to evaluate status of HIV Testing and counseling of pregnant women in year 2011-2012 in Rajasthan state and to assess measures taken to reduce transmission from mother to child to achieve zero transmission status in new born. **RESULTS:** The study reveals that only 4, 16, 343 pregnant women i.e. only 21.91 % were tested in the year 2011-12 out of estimated 1.9 million pregnancies every year in Rajasthan state and 454 pregnant women i.e. only 12.39% were detected HIV positive out of about 3600 expected to be positive during that period. **CONCLUSION:** It is observed that around 1000 new born children in Rajasthan are likely to get transmission of HIV infection from unidentified positive pregnant women every year. This can be prevented by ensuring and HIV testing and by enhancing facilities for safe delivery of every pregnant women.

KEYWORDS: Pregnant Women (PW), Acquired Immune-Deficiency Syndrome (AIDS), Human Immune-deficiency Virus (HIV), Integrated Counseling & Testing Centre (ICTC), Prevention of Parent To Child Transmission Program (PPTCT).

INTRODUCTION: The first case of HIV / AIDS in India was reported in Tamil Nadu in 1986 and it is estimated that in India there are approximately 2.5 million people who are HIV positive.[1] In India Parent to child transmission is the most important source of HIV infection in children below fifteen years of age.[2] About 1.9 to 2.0 million pregnancies are estimated every year in Rajasthan state.[3] HIV prevalence rate among women attending Ante Natal Care (ANC) services is 0.19% (HSS 2008).[4] This translates to about 3600 pregnant women are infected by Human Immune Deficiency Virus (HIV) each year. With transmission risk of HIV transmission from infected mother to child being 24-36% it leads to transmission of HIV infection to about 1100 new born every year in Rajasthan.

The present study is to evaluate status of HIV Testing and counseling of pregnant women in Rajasthan state and in turn to evaluate risk of HIV infection transmission from positive pregnant

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women to new born children in Rajasthan. Also to simultaneously study efficacy of ongoing activities and to evaluate its operational efficiency in achieving the objectives of prevention of HIV transmission from HIV positive mother to new born child, so as to be able to achieve HIV free progeny in the society.

MATERIAL AND METHODS: The present study involves analysis and interpretation of various data entered and recorded at 195 Integrated Counseling & Testing Centers[5] in Rajasthan during the period from April 2011 to March 2012. Subsequently these collected data were compiled, evaluated and analyzed.

Testing Procedures: HIV testing facilities are being provided free of cost by National AIDS Control organization and Rajasthan State AIDS Control Society at Integrated Counseling & Testing Centers. Commonest method to diagnose HIV infection is by detection of presence of antibodies to HIV in the blood of an HIV-infected person.

Rapid tests, used to diagnose HIV infection are user friendly and can provide quick results. Variety of rapid tests are available and employ different principles. NACO recommends the use of rapid HIV test kits which provide results within 30 minutes. Rapid test kits with detection rate >99.5% of all HIV-infected individuals and false-positive results in <2% of all those who are tested are recommended for general use. Testing is done free of cost in Integrated Counseling & Testing Centre (ICTC) in the government health sector in all Stand-alone Facility providing Integrated Counseling & Testing Centers supported by Rajasthan State AIDS Control Society (RSACS).

A person who has a negative result in one test is declared to be HIV-negative. A person is declared to be HIV-positive when the same blood sample is tested three times using kits with different antigens/principles and the result of all three tests is positive.[6] Emergency Testing is done for women with an unknown HIV status and in labor, the labor room nurses, resident doctors or medical officer provides basic information on HIV/AIDS and about HIV testing. Thereafter, a single HIV test will be offered to determine the HIV status of the pregnant woman and requirement for Anti Retro Viral prophylaxis to prevent mother-to-child transmission. A repeat sample is collected and tested on the next working day at Integrated Counseling & Testing Centre (ICTC) to confirm the HIV status.

HIV pre-test information /education/ counseling involves providing basic information on HIV and risk assessment to pregnant women attending Integrated Counseling & Testing Centre. HIV post-test counseling helps pregnant women to understand and cope with the HIV test result:

- In case of a negative test result, the counselor reiterates basic information on HIV and educates to adopt behavior that reduces the risk of getting infected with HIV in the future. In case the pregnant woman is in the window period, a repeat test is recommended.
- In case of a positive test result, Integrated Counseling & Testing Centre counselor assists and educates to understand the implications of the positive test result and helps in coping with the test result. The counselor also ensures the access to treatment and care and supports disclosure of the HIV status to the spouse.

Follow-up counseling includes re-emphasis on adoption of safe behavior to prevent transmission of HIV infection to others. Follow-up counseling also includes establishing linkages and

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referrals to services for care and support including Ante Retro Viral Therapy, Nutrition, Home-based care and Legal support.

At Integrated Counseling & Testing Centre during interpersonal communication the counselor collects the information and keeps it in different record keeping registers as under[7]:

1. Patient Identification Distinct Register (for Pregnant Women)
2. Patient Identification Distinct Register (other than Pregnant Women)
3. Register for General Clients (excluding Pregnant Women)
4. Register for Pregnant Women
5. Post-natal Follow-up (Only for positive cases)
6. Human Immune-deficiency Virus-Tuberculosis Collaborative Activity Register
7. Laboratory Register

RESULTS: Data entered and recorded at 195 Integrated Counseling & Testing Centers in Rajasthan during the period from April 2011 to March 2012are compiled, evaluated and analyzed. District wise Data of pregnant women tested and counseled in year 2011-2012 are shown in Tables no 1A and 1B.Total numbers of pregnant women tested for HIV in Rajasthan State in the year 2011-2012 and percentage Coverage are shown in Table no 2. District wise Data of all 33 districts for pregnant women diagnosed and found tested positive for HIV / AIDS in 2011-2012 are shown in Tables no 3A and 3B.

The present study data evaluation and analysis reveals that only 4, 16, 343 pregnant women i.e. only 21.91 % out of estimated 1.9 million pregnancies every year in Rajasthan state were tested in the year 2011-12. That means about 78.09% pregnant women have not been tested for HIV/ AIDS in the year 2011-12 which reveals that there exists a major gap in testing of pregnant women for HIV. Since identifying HIV/ AIDS status for every pregnant woman is essential for control of Parent to Child Transmission which is a major preventable cause, therefore this gap is of serious concern and needs urgent attention.

With prevalence rate of 0.19% in Rajasthan there are about 3600 pregnant women projected and estimated to be positive for HIV in Rajasthan state every year. However out of it only 454 pregnant women i.e. 12.39% were detected and identified positive for HIV /AIDS in the year 2011-12. It means that 87.61% of estimated HIV positive pregnant women who remained undetected undiagnosed, have delivered without getting the mandatory measures and services necessary for safe delivery. This happened because their HIV status was not known and therefore they were not linked to Prevention of Parent To Child Transmission Program (PPTCT).

It translates that every year in Rajasthan state around 1000 children are getting HIV infection from their mothers who are not tested, diagnosed and thus in turn are not getting services and facilities essential for prevention of transmission of HIV. This transmission of HIV from mother to child can be prevented by enhancing the facilities and ensuring testing of every pregnant women for HIV and linking them to Prevention of Parent To Child Transmission Program.

CONCLUSION: Safe delivery and prevention measures are necessary to stop transmission of HIV/AIDS from mother to child. The present study reveals that there is wide gap in testing and assessing HIV Positivity status in pregnant women in Rajasthan state as out of about 1.9 million pregnancies estimated every year only 4, 16, 343 pregnant women i.e. only 21.91% were tested for

HIV in the year 2011-12. It means that majority of pregnant women i.e.78.09 %in Rajasthan State during this period were not tested for HIV.

Out of about 3600 projected and estimated HIV /AIDS positive pregnant women only 454 pregnant women i.e. only 12.39% are detected positive for HIV/AIDS in the year2011-2012. It shows that undiagnosed 87.61% of estimated HIV positive pregnant women in the year 2011-12 and May thus possibly similar number every year are delivering without getting the mandatory services and measures necessary for safe delivery. As a result these 87.61% of pregnant women estimated to be HIV positive do not have asses and linking to Prevention of Parent to Child Transmission Program as they are not aware of their positivity status. Therefore these all undiagnosed patients remained deprived of HIV testing facilities and thus in turn were deprived of PPTCT facilities during this period. It translates that around 1000 new children are getting HIV infection from their mothers every year in Rajasthan which can be prevented by simple measures.

HIV testing and counselling is essential for all pregnant women and can be achieved by inclusion of these services as part of routine Ante-Natal Care. Pregnant women should be counseled and educated. This will help to identify and diagnose undetected positive pregnant women and in turn will be linked to Prevention of Parent to Child Transmission Program. This will lead to facilitate birth of HIV free child.

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SL. No.	Name District	PW Counseled	PW tested
1	Ajmer	37261	37124
2	Alwar	31025	30363
3	Banswara	7549	7501
4	Baran	3944	3943
5	Barmer	21603	21375
6	Bharatpur	9404	9249
7	Bhilwara	11738	10569
8	Bikaner	15987	15759
9	Bundi	4737	4720
10	Chittaurgarh	11148	10938
11	Churu	7816	7765
12	Dausa	3862	3785
13	Dhaulpur	6384	6379
14	Dungarpur	5742	5742
15	Ganganagar	14306	14286
16	Hanumangarh	4548	4548

TABLE 1A

District wise PW tested and counseled in year 2011-12 in table no 1A and 1B

SL. No.	Name District	PW Counseled	PW tested
17	Jaipur	82378	76191
18	Jaisalmer	3444	3441
19	Jalor	3303	3063
20	Jhalawar	7585	7574
21	Jhunjhunun	2271	2271
22	Jodhpur	24507	21437
23	Karauli	6625	6625
24	Kota	14343	14293
25	Nagaur	6937	6880
26	Pali	5167	5167
27	Pratapgarh	1183	1183
28	Rajsamand	7568	7568
29	SwaiMadhopur	4138	4053
30	Sikar	5141	4860
31	Sirohi	4914	4898
32	Tonk	16408	16292
33	Udaipur	41228	36501
	Total	434194	416343

TABLE 1B

District wise PW tested and counseled in year 2011-12 in table no 1A and 1B

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Indicators	Year 2011-12
Estimated Pregnancies	19, 00, 000
Pregnant women Tested	4, 16, 343
% Coverage	21.91

Table 2

Pregnant women tested for HIV V/S Estimated Pregnancies in table no 2.

SL. No.	Name of District	HIV +ve Pregnant Women
1	Ajmer	50
2	Alwar	14
3	Banswara	11
4	Baran	1
5	Barmer	17
6	Bharatpur	4
7	Bhilwara	28
8	Bikaner	6
9	Bundi	3
10	Chittaurgarh	21
11	Churu	2
12	Dausa	0
13	Dhaulpur	13
14	Dungarpur	14
15	Ganganagar	5
16	Hanumangarh	4

TABLE 3A

District wise HIV positive PW diagnosed in year 2011-12 in table no 3

SL. No.	Name of District	HIV +ve Pregnant Women
17	Jaipur	48
18	Jaisalmer	2
19	Jalor	7
20	Jhalawar	3
21	Jhunjhunun	1
22	Jodhpur	66
23	Karauli	1
24	Kota	14
25	Nagaur	6
26	Pali	18

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27	Pratapgarh	2
28	Rajsamand	11
29	Sawai Madhopur	2
30	Sikar	5
31	Sirohi	3
32	Tonk	8
33	Udaipur	64
	Total	**454**

TABLE 3 B

District wise HIV positive PW diagnosed in year 2011-12 in table no. 3.

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