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5 YEAR'S RETROSPECTIVE STUDY OF INCIDENCE OF HIV IN FEMALE ATTENDING ANTINATAL CLINIC AND INCIDENCE OF TRANSMISSION OF HIV TO THEIR CHILDREN

Gynaecology

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ABSTRACT

BACKGROUND - Due to the rapidly growing incidences of HIV infection worldwide, there is a need to evaluate the HIV-infected population. HIV In antenatal patients increases vertical transmission of HIV-infected neonates and therefore assessment required.
OBJECTIVE- The purpose of the present study is to determine the prevalence of HIV infections in patients at Tertiary hospital coming for antenatal care and to find out vertical transmission rate in HIV infected patients.
MATERIAL AND METHODS – This study was conducted in all antenatal patients (including emergency OPD) coming to Pannadhay Rajkiya Mahila Chikitsalaya, RNT Medical college, Udaipur during April 2012 to March 2017.
RESULTS - HIV prevalence (%) in pregnant female is almost constant, inspite of increased ANC OPD and is lower than the national data. Delivery of HIV positive pregnant female-90.62% to 100% institutional deliveries and 0 to 9.3% home deliveries during April 2012 to March 2017.
Incidence of vaginal deliveries from 76.92 to 100% and Caesarean section rate from 6.67% to 23.08%.Caesarean section is done for obstetric indication only as per NACO guideline.
Incidence of HIV in child at 18 months of age is from 0% to 20%. And is decreasing from April 2012 to March 2017
CONCLUSION - Universal screening of all female attending ante-natal clinics should be done to diagnose HIV and initiate HRT in HIV infected patients. Timely diagnosis and treatment of HIV infected patient reduces the peri-natal transmission.

KEYWORDS

INTRODUCTION –
Worldwide 50% of the people living with HIV and AIDS are women and most of these women are childbearing age. Maternal HIV and associated neonatal adverse outcomes are one of the important causes of preventable morbidity and mortality. HIV infection can often be life threatening and fatal. Besides the burden of HIV positive children on society, due to the death of one or both parent's due to AIDS. Child transmission (MTCT) is causing a major social problem by producing an orphan.

So present study has been conducted to assess the incidence of parent to children transmission in a tertiary care hospital, Pannadhay Rajkiya Mahila Chikitsalaya, RNT Medical College, Udaipur.

VIROLOGY –
- HIV is RNA retrovirus
- HIV-1(more common), HIV-2
- The principal target of virus =T lymphocytes(key role in regulating the immune response) Specific at CD4 surface antigen (receptor for the virus)

NATURAL HISTORY OF DISEASE -
- Incubation period - days to weeks
- Acute retroviral syndrome (1 week-3 months)- fever, nightsweats, fatigue, rash, headache, lymphadenophathy, pharyngitis, myalgias, arthralgias, nausea, vomiting, diarrhea .
- Immune response to HIV (1-2 weeks)
- Latent period (about 10 yrs)
- Acquired immunodeficiency syndrome (AIDS) is a term which applies to the most advanced stages of HIV infection. It is defined by a CD4 T-cell count < 200 cells/μL, by CD4 T-cells comprising <14 percent of all lymphocytes, or one of several AIDS – defining illnesses.

HIV Transmission from Mother to Infant -
- ANTENATAL
- In-utero by transplacental passage
- INTRANATAL
- Exposure to maternal blood and vaginal secretions during labor and deliver
- POSTNATAL
- Postpartum through breastfeeding

HIV testing of pregnant female done with "opt out approach"
Treatment during pregnancy[4] –

The recommended first-line regimen for HIV infected Pregnant Women is
Tenofovir (TDF) (300 mg) +
Lamuvidine (3TC) (300 mg) +
Efavirenz (EFV) (600 mg)

This is available as single tablet and is safe for both pregnant and breastfeeding woman. It is well tolerated, needs low monitoring and compatible with other drugs used in clinical care.

PREVENTION OF PARENT TO CHILD TRANSMISSION OF HIV (PPTCT) –
- Acceleration of treatment for all pregnant and breastfeeding women living with HIV is still needed to achieve elimination of new infections among children and halve HIV-related deaths among pregnant women and new mothers.[1]
- PPTCT programme was started in year 2002 in INDIA.
- 4 prongs of PPTCT[4]

1. *Prong 1*: Primary prevention of HIV (HIV Negative i.e. general population) - preventing new HIV infections among women of childbearing age
2. *Prong 2*: Prevent unintended pregnancies (HIV +ve Not Pregnant) - preventing unintended pregnancies among women living with HIV
3. *Prong 3*: Prevention of MTCT (HIV +ve & Pregnant) –
4. *Prong 4*: Care, support and treatment (HIV +ve Mother& Child)- providing appropriate treatment, care and support to mothers living with HIV and their children and families.

- Routine offer of HIV counselling and testing to all pregnant women in ANC with an OPT OUT OPTION[4]
- MTCT responsible for 90% new HIV infection in children. MTCT is 15-45% without ART can be reduced to 2-5% with ART (less than 5% in breastfeeding populations and less than 2% in non-breast feeding populations).
- Avoidance of breastfeeding, anti-retroviral therapy and appropriate management of delivery has reduced mother-to-child transmission rates from 25–30% to less than 1%.[3]
- Since 2006, HIV retesting during the third trimester and breastfeeding has been recommended by the World Health Organization in higher prevalence (≥5%) settings to reduce MTCT.[6]
- THE Most Important Factor for Transmission of HIV is HIGH viral load in mother.

Exclusive breast feeding recommended for all newborn. Exclusive replacement feeding may be done only if the mother has died or has a terminal illness or decides not to breastfeed despite adequate counselling[4].

Early infant diagnosis –

- Most infants born to HIV positive mothers would test positive using standard HIV antibody tests such as ELISA or rapid tests until the level of maternal antibody falls below limit of detection at 18 months
- HIV antibody tests are however useful for identifying potentially un-infected infants as early as 6mths to 18 months of age if they are not breastfed, or if they ceased breastfeeding 6 weeks prior to testing

Categories Of Districts[5] -

- Category A : More than 1% ANC prevalence in district in any of the sites in the last 3 years.
- Category B : Less than 1% ANC prevalence in all the sites during last 3 years with more than 5% prevalence in any HRG site(STD/FSW/MSM/IDU).
- Category C : Less than 1% ANC prevalence in all sites during last 3 years with less than 5% in all HRG sites, with known hot spots (Migrants, truckers, large aggregation of factory workers, tourist etc).
- Category D: Less than 1% ANC prevalence in all sites during last 3 years with less than 5% in all HRG sites with no known hot spots OR no or poor HIV data.
- *(ANC: Ante-natal Clinic; HRG: High Risk Group; STD: Sexually Transmitted Disease; FSW: Female Sex Worker; MSM: Men who have Sex with Men; IDU: Injecting Drug User.)*
- UDAIPUR COMES UNDER CATEGORY B

AIM'S AND OBJECTIVE –

1. To know the prevalence of HIV infection in pregnant female attending antenatal and emergency OPD.
2. To link patient's to ART centre for treatment of HIV, who were diagnosed during emergency.
3. To determine the incidence of Maternal to child transmission (MTCT).

MATERIAL AND METHOD'S –

1. This study was conducted in all antenatal patients (including Emergency OPD) coming to Pannadhay Rajkiya Mahila Chikitsalaya, RNT Medical College, Udaipur during April 2012 to March 2017.
2. Data collected from computerized management information system.

RESULTS AND DISCUSSION –

Table 1

DURATION	TOTAL ANC	TESTED FOR HIV	FOUND POSITIVE	% of cases Found Positive
APR 2012 to MAR 13	25295	10833	29	0.11%
APR 13 to MAR 14	24174	16403	36	0.15%
APR 14 to MAR 15	22383	201789	40	0.18%
MAR 15 to APR 16	22439	20538	32	0.14%
MAR 16 to APR 17	21498	25363	32	0.15%

Graph 1

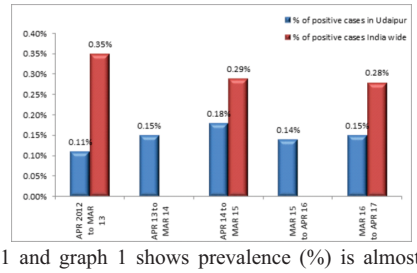

Table no.1 and graph 1 shows prevalence (%) is almost constant, inspite of increased ANC OPD and is lower than the national data.

Table 2

Duration	Delivery	Institutional Delivery	Home Delivery
APR 2012 to MAR 13	25	24 (96%)	1 (4%)
APR 13 to MAR 14	23	23 (100%)	0
APR 14 to MAR 15	38	37 (97.36%)	1 (2.63%)
MAR 15 to APR 16	32	32 (100%)	0
MAR 16 to APR 17	32	29 (90.62%)	3 (9.38%)

Table no. 2 shows 90.62% to 100% institutional deliveries and 0 to 9.3% home deliveries during April 2012 to March 2017.Our aim is to motivate all patient to deliver at health facility to ensure HAART and prophylaxis for PPTCT to newborn.

Table 3

DURATION	DELIVERY	MODE OF DELIVERY			
		Normal Vaginal Del.		CS	% CS
APR 2012 to MAR 13	25	22	86.36%	3	13.64%
APR 13 to MAR 14	23	23	100%	0	0.00%
APR 14 to MAR 15	38	34	88.24%	4	11.76%
MAR 15 to APR 16	32	30	93.33%	2	6.67%
MAR 16 to APR 17	32	26	76.92%	6	23.08%

Table no. 3 shows incidence of vaginal deliveries from 76.92 to 100% and Caesarean section rate from 6.67% to 23.08%.Caesarean section is done for obstetric indication only as per naco guideline.

Table 4

DURATION	BABY TESTED FOR HIV AT 18 MONTHS	POSITIVE AT 18 MONTH	POSITIVE AT 18 MONTH %
APR 2012 to MAR 13	10	2	20.00%
APR 13 to MAR 14	5	0	0.00%
APR 14 to MAR 15	24	1	4.17%
MAR 15 to APR 16	23	0	0.00%
MAR 16 to APR 17	19	0	0.00%

Table no. 4 shows incidence of HIV in child at 18 months of age is from 0% to 20%. And is decreasing from April 2012 to March 2017.we must focus to improve testing rate of HIV at the age of 18 months.

Table 5

DURATION	LIVE BIRTH	STILL BIRTH	BABY DEATH (BEFORE 18 MONTH)	BABY TESTED FOR HIV AT 18 MONTHS
APR 2012 to MAR 13	22	3	3	10
APR 13 to MAR 14	22	1	1	5
APR 14 to MAR 15	34	3	12	24
MAR 15 to APR 16	31	1	5	23
MAR 16 to APR 17	28	4	4	19

Table no 5 shows many child do not come back to health facilities for follow up, our aim is to increase follow up of children.

CONCLUSION –

- Universal screening of all female attending ante-natal clinics should be done to diagnose HIV and initiate HRT in HIV infected patients. Timely diagnosis and treatment of HIV infected patient reduces the peri-natal transmission.
- ARV therapy should be offered to all HIV infected Pregnant women regardless of CD4 cell count or HIV RNA level.(WHO Guidelines 2013) (ART shall be initiated only at ART centre)
- Majority of the pregnant women came to the labour room directly (unbooked) were deprived of the (PPTCT) coverage.

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