

HIV Parents and Their Kids

D. VIJAYA, SATHISH J.V.

ABSTRACT

Introduction: Human immune deficiency virus infection is most distressing as it involves the next generation. Most HIV infection in developing countries like India is transmitted heterosexually infecting woman, which inturn leads to perinatal transmission.

Materials and Methods: The aim of the present study is to determine prevalence of HIV infection in children of HIV infected either/both parents. This study is a retrospective analysis of prospectively collected data of 150 children (Mean age 5.04 years) belonging to 110 families.

Observations: Out of 150 children 36 (24%) were seropositive for HIV infection (19 boys, 17 girls). Maximum number of sero-

positive children was found in the age of 2-4 years (35.84%). When both parents were positive, father positive and mother negative, father negative and mother positive, children were positive in 28.57%, 0% and 33.33% respectively.

Conclusion: This is a preliminary report of children having HIV infection in relation to parents HIV status with no access to antiretroviral therapy to the mother or newborn. This study highlights that in the absence of intervention, rate of vertical transmission of HIV is very high. The increasing number of HIV infected adults, particularly women makes the prevention of mother to child transmission of HIV a public health priority in developing country like India.

Key Words: HIV, Children

INTRODUCTION

HIV has a profound impact not only on the people it infects but also on their families. Infection with HIV was recognized in children in 1982. Approximately 33 million adults most of them parents, are now living with HIV worldwide and more than 15 million children have orphaned by AIDS [1,2]. India too is in the grip of the HIV/AIDS epidemic. Mother-to-child transmission (MTCT) is the largest source of HIV infection in children below the age of 15 years [3]. According to National AIDS Control Organization (NACO), about 30,000 infants are estimated to acquire HIV infection each year [4]. HIV infection is spreading rapidly in women of childbearing age worldwide. Women of childbearing age constitute nearly half of adults currently living with HIV globally [5]. The aim of the present study is to determine prevalence of HIV infection in children of HIV infected either/both parents belonging to 110 families.

MATERIAL AND METHODS

A total of 110 randomly selected family of parents and their children (150) formed the study group. The study period was from Jan 2006

to June 2007. The suspected cases of HIV infection either father or mother was referred to Department of Microbiology, Bowring & L.C. Hospital, Bangalore for HIV testing. Detailed history of occupation, blood transfusion, sexual exposure, economic status and presenting symptoms were recorded. After pretest counseling verbal consent was taken for the HIV testing. Serum samples were collected and tested by ELISA. Reactive sera were confirmed with a test of different principle and/or antigen [6]. Once found positive, verbal consent was taken to test their spouse and children. Confidentiality of the HIV status was maintained.

RESULTS

Mean age of father, mother, sons and daughters were 33, 26, 5.5 and 6 years respectively. Occupation of the father was agriculturist in 33.9%, coolie in 29.09%, driver in 20% and others 20%. All mothers were housewives. Among fathers 44% presented with PUO, 28% weight loss, 20% pulmonary/extrapulmonary tuberculosis and 8% with genital infection. 96.36% of fathers and 2.72% of mothers had H/O extramarital sex. One (0.9%) of the mother had H/O

Age in years	Son No. 88			Daughter No.62			Total
	Positive (%)	Negative (%)	Total	Positive (%)	Negative (%)	Total	
2-4 No.62	12 (34.28%)	23 (65.71%)	35	10 (37.03%)	17 (62.96%)	27	22 (35.48%)
5-7 No.49	6 (17.64%)	28 (82.35%)	34	5 (33.33%)	10 (66.66%)	15	11 (22.44%)
8-10 No.23	1 (8.33%)	11 (91.66%)	12	1 (9.09%)	10 (90.90%)	11	2 (8.6%)
11-20 No.16	0 (0%)	7 (100%)	07	1 (11.11%)	8 (88.88%)	09	1 (6.25%)
Total 150	19 (21.59%)	69 (78.40%)	88	17 (27.41%)	45 (72.58%)	62	36 (24%)

[Table/Fig-1]: Age, sex distribution and HIV positivity of children

HIV Status of parents	Sons No. 88			Daughter No. 62			Total Positives (%)
	No	Positive	Negative	No	Positive	Negative	
Father +ve Mother +ve No. 86	66	17	49	53	17	36	34 (28.57)
Father +ve Mother -ve No. 20	17	00	17	08	00	08	00 (0)
Father -ve Mother +ve No. 04	05	02	03	01	00	01	02 (33.33)

[Table/Fig 2]: Seropositivity of children in relation to HIV status of parents

blood transfusion. Seventy-seven couple had single child, 27 had 2 children and 5 had 3 children.

DISCUSSION

Infection of HIV was recognized in children in 1982.⁷ The present study shows 36 (24%) children were HIV infected. This high percentage of positivity is due to absence of interventions to prevent vertical transmission.

HIV infection was more in children of age group 2-4 years (35.48%). It reflects that the mother recently infected as elder children were not affected, which correlates with the study of Lokeshwar [8]. In all HIV positive children, mothers were positive (100%), whereas when the mother was negative none of the children were infected.

One child had co-infection of HIV and HBV have been reported by Bhargava A [9]. 36 (40%) of children were born to 90 (81.81%) HIV infected mothers. Enough data are not available on the prevalence of HIV infection in children in relation to that of HIV status of their parents.

Use of rapid HIV testing with unknown HIV status of the mother at labour and delivery would allow initiation of prophylactic strategies to reduce MTCT. Interventions to interrupt transmission at the time of delivery, such as antiretroviral prophylaxis given in late gestation or peripartum and elective cesarean section have been shown to be effective in reducing MTCT [10].

CONCLUSION

This is a preliminary report of children having HIV infection in relation to parents HIV status with no access to antiretroviral therapy to the mother or newborn. Implementing antenatal retroviral prophylaxis can reduce vertical transmission, as these facilities available in

most of centers in our country. A further study has to be done to find out the number of infected children with access to antiretroviral therapy.

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AUTHOR(S):

1. Dr. D. Vijaya
2. Dr. Sathish J.V.

PARTICULARS OF CONTRIBUTORS:

1. D.M.B.B.S,M.D., Professor & HOD Microbiology, AIMS, B.G. Nagara.
2. M.B.B.S,M.D, Assistant Professor Dept Microbiology, AIMS, B.G.Nagara.

NAME, ADDRESS, TELEPHONE, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. D. Vijaya
Professor & HOD Microbiology
AIMS, B.G.Nagara 571448
Karnataka, India
Phone: 94820 09120
E-mail: vijayadanand@rediffmail.com

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