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Original Research Paper

Microbiology

OCCURRENCE & DEATH OF HIV POSITIVE CHILDREN IN A TERTIARY CARE HOSPITAL IN AJMER(RAJASTHAN).

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ABSTRACT

Background: Globally 1.8 million children are living with HIV and in India, most of these infections are acquired by perinatal transmission. This study was conducted to see the occurrence of HIV seropositivity among children in the tertiary care hospital ,Ajmer after the execution of the PPTCT program.

Materials and Methods: It was a retrospective study . The inclusion criteria was children aged 18 month to 14 years, attending the Integrated Counseling and Testing Centre (ICTC) .

Statistical Analysis: Present study was done, using computer software SPSS Trial version 23 and primer. Out of the 3487 tested, a total of 75 (2.15%) children were positive for HIV infection. Out of these 75 subjects, 45 were male children (m:f = 1.5:1) Most of cases were observed in 5 to 10 years age group . The commonest mode of transmission was Perinatal . Out of total 75 cases mortality was observed in 85.33% cases.

Conclusion: Still some other plans and strategies are needed to prevent new HIV infection in mothers and child.

KEYWORDS : PPTCT,HIV, ICTC

INTRODUCTION:

HIV has always been a scourge of mankind, it creates a havoc in children not only physically but also socially & psychologically . Globally in 2017 , 1.8 million children out of 36.9 million people were living with HIV . In India (2017), out of 88,000 newly HIV positive cases 3,700 were children (aged 0-14 years) .(1) At different levels the prevention of parent-to-child transmission (PPTCT) program targets to prevent the perinatal transmission . This study was conducted to see the occurrence of HIV seropositivity among children in the tertiary care hospital ,Ajmer after the execution of the PPTCT program.

Material and method:

It was a retrospective study , the data was taken from ART, JLN Medical college and hospital,Ajmer. The inclusion criteria was children aged 18 month to 14 years, attending the Integrated Counseling and Testing Centre (ICTC) . They were tested for HIV antibodies according to the NACO guidelines 2015 .Less than 18 month of children were excluded . A detailed history about age, sex, HIV serostatus of the parents, and history of blood transfusion was recorded.

Statistical analysis:

Descriptive and Inferential statistical analysis has been carried out in the present study using computer software (SPSS Trial version 23 and primer). The qualitative data were expressed in proportion and percentages and the quantitative data expressed as mean and standard deviations. The difference in proportion was analysed by using chi square test . the difference in means among the groups was analyzed using the student T Test for parametric data and paired T test was used to compare the CD4 count from baseline Significance level for tests were determined as 95% (P< 0.05).

RESULTS:

A total of 3,487children between 18months-14years comprising of 2,188 male and 1,299 female children were screened during this study. Out of 3,487 subjects, a total of 75(2.15%) children were positive for HIV antibodies (fig. no.1).Out of these 75 subjects, 45 were male children (m:f = 1.5:1) Most of cases were observed in 5 to 10 years age group(table number 1) .

Figure number 1 showing trends of positivity per year

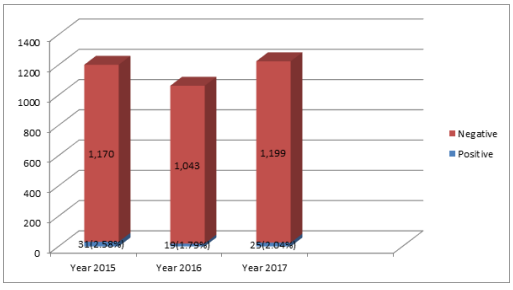


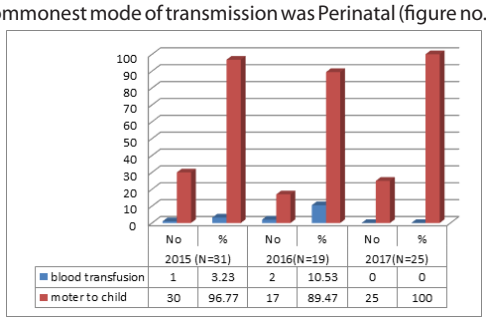
Table Number 1:showing yearly age distribution of hiv children

	2015 (N=31)		2016(N=19)		2017(N=25)		Total(N=75)	
AGE	No	%	No	%	No	%	No	%
18 month<5year	14	45.16	6	31.58	7	28	27	36.00
5 to 10 years	11	35.48	11	57.89	14	56	36	48.00
11 to 15 years	6	19.35	2	10.53	4	16	12	16.00
	31	100.00	19	100.00	25	100	75	100.00
Mean	6.32	3.96	6.58	3.34	7.28	3.59	6.71	3.67

Chi-square = 3.577 with 4 degrees of freedom; P = 0.466NS

No significant difference was observed according to age among the years . Upto 15 years age , Most of cases were observed in 5to 10 years of age group (in 2015 – 35.48% , in 2016 57.89% , in 2017 56%)No significant difference was observed according to mean age(P=0.62NS)

The commonest mode of transmission was Perinatal (figure no.2)



Chi-square = 3.198 with 2 degrees of freedom; P = 0.202 NS
No significant difference was observed according to mode of transmission among the years .
Out of total 75 cases mortality was observed in 14.67% cases.(table number2)

Table Number 2 Showing Yearly Distribution Of Mortality In Hiv Children:

	2015 (N=31)		2016(N=19)		2017(N=25)		Total(N=75)	
	No	%	No	%	No	%	No	%
Died	5	16.13		0.00	6	24	11	14.67
Alive	26	83.87	19	100.00	19	76	64	85.33
	31	100.00	19	100.00	25	100	75	100.00

Chi-square = 5.059 with 2 degrees of freedom; P = 0.080 NS

Table number 3:showing correlation of hiv children with cd4 cell count

CD4 Count-	Alive			Died			P Value LS
	N	Mean	SD	N	Mean	SD	
Baseline	55	516.6	344.1	10	334.2	376.8	0.13NS
Latest	55	630.5	362.1	10	371.4	451.7	0.04S

No significant association was observed CD4 count with mortality status at baseline but mean Count was significantly less in died cases as compared to alive cases (P0.04S). Ten cases were drop out. (table number 3).

DISCUSSION & CONCLUSION:

The overall seropositivity in the present study is 2.15% (75/3487) in our study it is lower than most of the recent study conducted in India, Anshu mittal et al., (2016) and Singh T et al., (2018) reported 5.03% and 10.4%respectively.(2,3)In this study males were affected more than females which was 45 (60%).Ramaswamy S et al., (2017) and Aggarwal et al.,(2016)) also reported males to be in higher number which were 65% and 65.5% respectively.(4,5)may be due to males are taken more care and females are ignored for diagnosis and treatment. In our study 96% 0f children acquired the infection by vertical transmission (from mother). Our finding were similar to Anshu mittal et al., (2016) which reported vertical transmission in 96.1% (2).In the present study, a significant number of HIV children were higher in the age group of 5 to 10 years (2) and Aggarwal et al.,(2016) reported HIV seropositivity was highest in the age group of 18months-05Years. May be due to less awareness.(4) In our study the mortality was 14.6% which was coinciding with the study done by Sandra et al in 2015.(6) In our study the mean baseline CD4 cell count for alive children & dead was 516.6 &334.2 respectably and after ART was 630.5&371.4 respectably .It clearly correlates that higher cd4 cellcount survival is better.Since there were 10 drop outs and still the occurrence of HIV is prevailing many other plans and strategies are needed to prevent new HIV infection in mothers and child, and to ameliorate the diagnosis and treatment of HIV for children.

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