Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Original Research Article

A study of Sociodemographic profile of HIV /AIDS children visiting ART centre and impact on orphanhood

1st... Dr Sadhana Panda

Associate Professor Dept. of Pediatrics MKCG Medical College Berhampur

DistGanjam, Odisha

2nd... Dr Hemanta Kumar Singh

Assistant Professor Dept. of Pediatrics MKCG Medical College Berhampur

DistGanjam,Odisha

3rd ....Dr Minakhi Kumari Sahu

Senior Resident Dept. of Pediatrics MKCG Medical College Berhampur

DistGanjam,Odisha

Corresponding Author

Dr Amita Patnaik

Assistant Professor

Department of Community Medicine

MKCG Medical College Berhampur Dist Ganjam, Odisha

Email: patnaikamita@gmail.com

Received:15/06/2022 **Accepted: 21/06/2022** **Published 27/06/2022**

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Abstract

Introduction: HIV/AIDS remains world's most significant health challenges, particularly in low and middle income countries. The human immunodeficiency virus(HIV) infects cells of the immune system, destroying or impairing their function. Infection with the virus results in progressive deterioration of the immune system, leading to immune deficiency. Acquired immune deficiency Syndrome (AIDS) is a term which applies to the most advanced stages of HIV infection.

Material And Methods: It is a cross sectional study . A semi structured and pretested Questionnairewas used to interview and examine HIV+ve children. Prior verbal and written consent was taken from parents/attendant of children. This study included 144 HIV positive children (6month-14yr) coming to ART centre of M.K.C.G Medical College , Berhampur, Ganjam, Odisha as per the suitable inclusion and exclusion criteria. Data were collected in the case record form.

INCLUSION CRITERIA – All children of >6mnth of age with confirmed HIV reports and attending ART centre of M.K.C.G Medical College. EXCLUSION CRITERIA- 1) Children <6mnth of age 2) Parents not giving consent 3) Children with other causes of immunodeficiency

Results: There were 2(1.3%) cases in 6mnth-1.5yr age group, 14 (9.7%) cases were in 1.5-5yr age group**.** 50(34.7%) cases were in >5yr-10yr age group. 78(54.1%) cases were in >10yr-14yr age group. Mean was 9.84yr and SD was 3.409 . In 131(90.9%)cases both parents were HIV positive. In 8(5.55%) cases only mother was HIV positive and father negative. In 3(2.08%) cases both father and mother were HIV negative. In 2(1.38%) cases parents HIV status was unknown. In 141(97.91%) cases the children got HIV from the mother during perinatal period(MTCT). In 3(2.08%) cases children got HIV infection due to blood transfusion. In 15(10.41%) cases all siblings were HIV +ve. In 40(27.77%) cases all siblings were HIV –ve. In 9(6.25%) cases some of the siblings were HIV +ve and some of the siblings were HIV –ve. In 80(55.55%) cases they don"t had siblings.

Conclusion: The prevalence of orphan-hood among the HIV-positive children was very high. It might lead to significant health consequence for the children. Larger community-based

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

studies are needed to determine the true magnitude of orphan-hood. The menace of HIV is more profound in children due to its effect on social standing and upbringing of the child. There is a need to do community based study and to provide support to the parents/caregivers of these children.

Keywords: Human immunodeficiency virus (HIV), Acquired immune deficiency Syndrome(AIDS), Children, Demographic profile

Introduction

HIV/AIDS remains world's most significant health challenges, particularly in low and middle income countries. The human immunodeficiency virus(HIV) infects cells of the immune system, destroying or impairing their function. Infection with the virus results in progressive deterioration of the immune system, leading to immune deficiency. Acquired immune deficiency Syndrome (AIDS) is a term which applies to the most advanced stages of HIV infection. It is defined by the occurrence of any of more than 20 opportunistic infections or HIV related cancers.[1]

There was no real idea of what caused it and consequently no real idea of how to protect against it. HIV has devastated many families , communities and continents. According to estimates by WHO and UNAIDS HIV has affected more than 36 million lives. In 2017 36.9 million people globally living with HIV. 21.7 million people were accessing ART in 2017.
1.8 million people became newly infected with HIV in 2017. 940000 people died from AIDS related illness in 2017. 77.3 million people have become infected with HIV since the start of the epidemic. Since 2010 new HIV infection among children have declined by 35% from 270000 in 2010 to 180000 in 2017.[2]

Children of today are youth of tomorrow. HIV affects this very precious generation and bear grave consequences to our future, own nation, the continent and world at large. It will adversely impact the health statistics , economic growth and above all the morale of nations.[3] Most children acquire HIV from their mother during pregnancy, birth and breastfeeding. Perinatal transmission is the most common mode of transmission of HIV infection in children. Hence there is need to continually expand efforts to prevent MTCT of HIV, counselling , early diagnosis of infection and improved care of paediatrics patients.[4]

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Infection with HIV ranges from asymptomatic sero conversion to severe symptomatic illness which can result in hospitalisation. World AIDS Day Campaign (December 1st) is aimed to raise awareness about AIDS.[5]

Children affected with HIV have to face many problems in addition to their own illness. The parents of these children usually suffers from HIV and they may not be able to provide proper nutrition and treatment for the child. In many cases the child becomes orphan and are forced to live a life of poverty. [5] It is the pervasive threat of death and fear of being left alone that constitutes chronic trauma for child survivors of HIV infection. Most of the children are deprived of education and get involved in antisocial elements of society. They live distressed childhood due to all these cumulating factors.[6] They lag behind the non orphans in immunisation, nutritional status, school enrolment and attendance and socioeconomic status. They presented more frequently with severe immune suppression and higher prevalence of opportunistic infection.[6]

The high prevalence of orphan hood among HIV positive children might lead to significant health consequence for them. The menace of HIV is more profound in children due to its social standing and upbringing of the child. There is a need to do community based study to support the parent/caregivers of these children and to determine the true magnitude of orphan hood. Socio demographic data and analysis can help to reduce the disease burden.[7]

Aims and Objectives of Study

To study the sociodemographic profile of HIV /AIDS children and prevalence of orphanhood among those children .

MATERIAL AND METHODS

It is a cross sectional study . A semistructured and pretested questionnaire was used to interview and examine HIV+ve children. Prior verbal and written consent was taken from parents/attendant of children. This study included 144 HIV positive children (6mnth-14yr) coming to ART centre of M.K.C.G Medical College, Berhampur, Ganjam, Odisha as per the suitable inclusion and exclusion criteria. Data were collected in the case record form.

INCLUSION CRITERIA – All children of >6month of age with confirmed HIV reports and

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

attending ART centre of M.K.C.G Medical college.

EXCLUSION CRITERIA- 1) Children <6month of age 2)Parents not giving consent 3)Children with other causes of immunodeficiency

Statistical Analysis: Data analysis wasdone using SPSS statistics . For categorical variables data were calculated as frequency and percent. For continous variables, data were calculated as mean +/- standard deviation.

Results

TABLE-1: DISTRIBUTION OF CHILDREN ACCORDING TO DIFFERENT AGE GROUP:

AGE GROUP	NUMBER OF CASES	PERCENTAGE
6mnth – 1.5 yr	2	1.3%
>1.5yr – 5yr	14	9.7%
>5yr – 10yr	50	34.7%
>10yr – 14yr	78	54.1%
Total	144	100%

It was found 2(1.3%) cases in 6mnth-1.5yr age group, 14 (9.7%) cases in 1.5-5yr age group**.** 50(34.7%) cases in >5yr-10yr age group. 78(54.1%) cases in >10yr-14yr age group. Mean was 9.84yr and SD was 3.409

TABLE 2: DISTRIBUTION OF CASES ACCORDING TO GENDER

GENDER	NUMBER OF CASES	PERCENTAGE
MALE	89	61.8%
FEMALE	55	38.2%
TOTAL	144	100%

In this study population there were 89(61.8%) cases male and 55 (38.2%) cases female.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

TABLE- 3: DISTRIBUTION OF CHILDREN ACCORDING TO THEIR RESIDENCE-

AREA(sub div)	Number of cases	Percentage
Berhampur	47	32.64%
Chhatrapur	62	43.05%
Bhanjanagar	31	21.52%
Other districts	4	2.77
Total	144	100

In our ART centre out of 144 HIV +ve children 47(32.63%) cases were coming fromBerhampur subdivision and 62(43.05%) cases were from Chhatrapur sub division and 31(21.52%) cases belonged to Bhanjanagar sub division. Rest 2(2.7%) cases were from other districts.

TABLE-4: DISTRIBUTION OF ORPHAN CHILDREN IN DIFFERENT AGE GROUP:

AGE GROUP	NUMBER OF ORPHANS	PERCENTAGE
6month-5yr	5	6.75
>5yr-10yr	19	25.67
>10yr-14yr	50	67.56
TOTAL	74	100

In our study we included 144 children and got total of 74 (51.4%)children lost their both parents and were orphans. Age wise distribution showed,50 (67.56%) orphans are of >10 to 14years of age 19(25.67%) orphans are of >5 to 10 years of age. 5 (6.75%) orphans are of less than 5 year age group.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

TABLE-5: DISTRIBUTION OF CHILDREN ACCORDINGTO PARENTS HIV STATUS

Parents HIV Status	Number of Cases	Percentage
F + M+	131	90.97
F- M+	8	5.55
F- M-	3	2.08
UK	2	1.38
Total	144	100

In 131(90.9%)cases both parents were HIV positive. In 8(5.55%) cases only mother was HIV positive and father negative. In 3(2.08%) cases both father and mother were HIV negative. In 2(1.38%) cases parents HIV status was unknown.

TABLE-6- DISTRIBUTION OF CHILDREN ACCORDING TO MODES OF TRANSMISSION:

MODES	Number of cases	Percentage
MTCT	141	97.91
BT	3	2.08
Others	0	0
Total	144	100

In 141(97.91%) cases the children got HIV from the mother during perinatal period(MTCT). In 3(2.08%) cases children got HIV infection due to blood transfusion.

TABLE-7: DISTRIBUTION OF CHILDREN ACCORDING TO THEIR SIBLINGS HIV STATUS:

Siblings HIV status	Number of cases	Percentage
All +ve	15	10.41
All -ve	40	27.77
Some +ve& some -ve	9	6.25

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

No sibling	**80**	**55.55**
Total	**144**	**100**

In 15(10.41%) cases all siblings are HIV +ve. In 40(27.77%) cases all siblings are HIV –ve. In 9(6.25%) cases some of the siblings are HIV +ve and some of the siblings are HIV –ve. In 80(55.55%) cases they don‟t have siblings.

TABLE-8: COMMON CLINICAL FINDING IN HIV POSITIVE CHILDREN:

Common clinical finding	Number Of Cases	Percentage
Failure To Thrive	**73**	**50.69**
Fever	**81**	**56.25**
Recurrent Diarrhoea	**28**	**19.44**
Lymphadenopathy	**54**	**37.5**
Oral Candidiasis	**38**	**26.38**
TB	**15**	**10.41**

In 73(50.69%) cases failure to thrive was present. In 81(56.25%) cases fever was the main complain. In 28(19.44%) cases Recurrent Diarrhoea was present. In 54(37.5%) cases Lymphadenopaty was present. In 38(26.38%) cases oral candidiasis was present. In 15(10.41%) cases TB was present.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Discussion

Our hospital based study included 144 children and various sociodemographic findings were analysed and prevalence of orphanhood was also studied.

Table-1 shows Age distribution in this study has some similarities and few differences from previous studies. In this study over 78(54.1%) cases were of >10-14yr age group and 50(34.7%) cases were of >5yr-10yr age group and 14(9.7%) cases were of >18mnth-5yr age group. Rest 2(1.3%) cases were of 6mnth-18mnth age group. In a study done by SinghS et al most of the children (49.9%) were in less than 5yr age group.[7] There were also a substantial number of older children (5-9yr) and 11% cases are over 9yr. A study done by Fetuga MB et al has shown 72% were in 5-9yr age group where as 27.8% belonged to 10-19yr age group.[8]A study done by Umesh S Joge et al found that 14.1% were in 0-4yr age group and majority (50%) were in 5-9yr age group and rest 35.5% children belong to>10yr age group. [9]

A study done by Sonani HP et al also found that high incidence of HIV/AIDS was found in the age group of 6-10yr with 73(58%) subjects followed by 11-15yrs with 41(34%) subjects.[10] But all other studies found that most of the children belong to 5-9yr (school age) age group. This may be due to decrease in incidence of new HIV infection in children due to MTCT as many programmes are there under PPTCT. **Table -2**in our study showing , out of 144 children, over 89 cases were male and 55 cases were female similar to previous studies where majority cases were male. In the study done by Singh S et al, 56.9% were male and 43.1% were female.[8] In a study done by Fetuga MB et al also had similar result where 53% were male and 46% were female.[7,8]Majority of children were male which signify parents and care takers were more concerned for illness of male child .

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Table-3 showed most of the cases around 62(43%) cases children came from Chhatrapur subdivision, 47 (32%) cases from Berhampur subdivision and 31(21%) cases of children were coming from Bhanjanagar subdivision. As free health services , better transportation were available in almost all subdivisional hospitals so more cases could be diagnosed and referred to ART center

Table-4 of our study , we included 144 children and got total of 74 (51.4%) children lost their both parents and were orphans. Age wise distribution showed, 50 (67.56%) orphans were of >10 to 14years of age 19(25.67%) orphans were of >5 to 10 years of age. 5 (6.75%) orphans were of less than 5 year age group. Parents dying due to HIV related complications forcing the children to be orphan was major concern as these children were deprived of basic health care. Burden of orphanhood was really challenging. Similar results were found in study by Bhattacharya M , Shah et al and Makumbi et al. [2,3,4] The literacy level, poor socioeconomic back ground and parental HIV status were major contributory factors.

Table-5 – data was regarding parents HIV status.In 131(90.9%)cases both parents were HIV positive. In 8(5.55%) cases only mother was HIV positive and father negative. These data revealed that still HIV considered as a social stigma . parents were seeking medical attention only after complications occurred or lately. Increase awareness and regular health visits could help in early detection of cases. We got more number of HIV positive mothers reflecting good antenatal visits and detection of disease by routine screening in ANC visits. Similar findings were seen in study by Sonani HP et al and Wani KA et al. [10,11]

Table -6 In our study,we found MTCT was the most common mode of transmission of HIV in children which was present in 141(97.9%) cases and rest 3(2.1%) cases children became infected with HIV from blood transfusion. Similar to this a study done in where MTCT was the principal mode of transmission in 88.5% cases. Also there was a study done by Uma Tet al where 97% of children got HIV through MTCT.[12] This was supported by the study Fetuga MB that the epidemiology and the burden of the disease vary greatly across regions and nearly 90% of the almost half a children who yearly get infected with HIV through their mothers live in sub-Saharan Africa.[8] MTCT of HIV is a field of health care that dramatically demonstrates the disease burden in north a study by Singh S et al .[7] The best official data indicate that more than 90% children living with HIV acquired the virus during pregnancy. Birth or breastfeeding forms of HIV transmission that can be prevented.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

Table-7 Present studyshowed 55% cases there were no siblings and 10% cases all siblings were HIV +ve and 27% cases all siblings were HIV –ve and 6% cases some sibling were HIV+ve and some were HIV – ve. In contrast to this another study done bySonani HP et al where their sibling‟s HIV status was not known. [10]Study by Uma Tet al had also comparable results. [12] Due to active detection of HIV positive cases and start of ART for the mother during early antenatal period led to more number of HIV negative siblings than HIV positive siblings and also the parents were counselled about family planning.

Table-8 Furthermore in our study it was found that in 50.69% cases presented as Failure to thrive, 56.25% cases fever was the chief complain,19.44% cases recurrent diarrhoea was present, 37.5% cases lymphadenopathy was present, 26.38% cases oral candidiasis was found and 10.41% cases children were suffering from TB. Recurrent infections along with inadequate nutrition led to failure to thrive. This result is similar to a result from a study done in Umesh S Joge where 44% cases having fever, 37% cases had malnutrition, 24% cases had diarrhoea, 34% had lymphadenopathy, 34% had respiratory tract infection and 6% cases had oral thrush Wani KA et al study had also similar results .[11,12]

Conclusion

Perinatal mode of transmission is the most common mode of acquiring HIV infection in pediatric age group. The HIV positive children are more vulnerable to become orphan as in majority of cases the parents are HIV positive. The prevalence of orphan-hood among the HIV-positive children is very high. It might lead to significant health consequence for those children. The literacy level, poor socioeconomic back ground and parental HIV status are major contributory factors. There is some evidence from previous studies that healthcare workers can make this task easierby providing appropriate guidance and support.. Hence interventions should be done to remove the barriers to HIV care and knowledge of HIV infection and that should be an integral part of HIV prevention programme. We believe there is great potential for interventions to be developed to support the affected families holistically.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

How to site this article : Panda S, Singh HK, Sahu MK, Patnaik A ; A study of Sociodemographic profile of HIV /AIDS children visiting ART centre and impact on orphanhood

References

1. M Gupta, K Puri, K Singh, S Malhotra. The road less travelled: a social and demographic profile of HIV-infected children accessing care at tertiary care centre in North India. Egyptian Dermatol Online. 2013;9(1):4.
2. Bhattacharya M, Rajeshwari K, Saxena R. Demographic and clinical features of orphans and non-orphans at a pediatric HIV centre in North India. Indian J Pediatr. 2010;77(6):627-31.
3. Shah I. Prevalence of orphans among HIV infected children: a preliminary study from a pediatric HIV centre in western India. J Trop Pediatr. 2008;54:258-60.
4. Makumbi FE, Gray RH, Serwadda D et al. The incidence and prevalence of orphanhood associated with parental HIV infection: a population-based study in Rakai, Uganda. AIDS. 2005;19(15):1669- 76
5. Florence SF, Andreas C, Séraphin N et al. Baseline demographic, clinical and immunological profile of HIV-infected children at the Yaounde gynaeco-obstetric and pediatric hospital, Cameroon. Pan Afr Med J. 2014;17:87.
6. Brown BJ, Oladokun RE, Odaibo GN, Olaleye DO, Osinusi K, Kanki P. Clinical and immunological profile of pediatric HIV infection in Ibadan, Nigeria. J Int Assoc Physicians AIDS Care (Chic). 2011 Jan/Feb;10(1):49-53.
7. Singh S, Jat KR, Minz RW, Arora S, Suri D, Sehgal S. Clinical profile of 516 children affected by HIV in a tertiary care centre in Northern India: 14 years of experience. Trans R Soc Trop Med Hyg. 2009 Jun;103(6):627-33.
8. Fetuga MB, Ogunfowora OB, Oyegunle VN, Thanni LO. A ten-year review of paediatric HIV/AIDS among hospitalized children in a Nigerian teaching hospital. Nig J Paediatr. 2005;32(3):29-32.
9. Umesh S Joge, Deepali S Dev, Rajesh N Lakde et al. Socio-demographic and clinical profile of HIV/AIDS patient visiting to ART center at a rural tertiary care hospital in Maharashtra state of India. Int J Bio Med Res. 2012;3(2)1568-1572.
10. Sonani HP, Unghad AK, Savani GT. Clinical and demographic profile of patient registered at ART centre Smimer, Surat. Nat J Comm Med. 2011;2(1)130-132.

ISSN: 0975-3583, 0976-2833 VOL13, ISSUE05, 2022

11. Wani KA. Clinical profile of HIV/AIDS patients in Srinagar, Kashmir, India. Int J Collab Res Intern Med Public Health. 2012;4;1703-1712.
12. Uma T, Srijayanth P, Valarmathi S, Sekar S, Kabilan N, Natarajan M. Socio-demographic profile of HIV/AIDS patients at ART centers in Chennai. BMC infectious diseases. 2012 Dec 1;12(S1)P53.