RESEARCH PAPER

Psychiatric Problems Amongst Adolescents Living With HIV at a Tertiary Care Centre in India

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Objective: To assess the prevalence of psychiatric problems among adolescents living with HIV (ALHIV). **Method**: Questionnaire-based cross-sectional study conducted at pediatric HIV clinic of a tertiary care hospital. **Participants**: 101 ALHIV between 10-18 years of age. **Results**: Of the 101 ALHIV, 12 (11.88%) met criteria for psychiatric disorders, of which dysthymi (5,41.6%) and oppositional defiant disorder (6,50%) were the commonest. Father of 7 (58.34%) and mother of 8 (66.6%) screen positive patients were dead as compared to 22 (24.7%) and 13 (14.6%) of screen negative patients (P=0.016 and P=0.0003, respectively). **Conclusion:** Psychiatric problems are common in ALHIV in the age group more than 15 years.

Keywords: *Depression, Dysthymia, Mental health disorders, Resilience.*

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Adolescence is associated with increased susceptibility to emotional and mental problems, and HIV can increase the probability of psychiatric problems among adolescents living with human immunodeficiency virus (ALHIV) [1]. With the effective and increased use of highly active antiretroviral therapy (HAART), children born with perinatal HIV infections are reaching adolescence and young adulthood in large numbers [2]. According to the report by UNICEF in 2018, nearly190,000 adolescents between the ages of 10 and 19 were newly infected with HIV [3]. Although India has an HIV prevalence of only 0.3%, with the adolescent group constituting around 22.8% of the total population, HIV among adolescents has a greater impact in terms of its prevalence and effects [7]. Limited studies from other parts of the world have shown that mental health problems affect around 12-44% of HIV-infected children [5,6]. The prevalence rate of psychiatric disorders in HIV-infected children and adolescents has uncommonly been reported from our country. An understanding of this problem is critical for improving their mental health and quality of life.

This study was conducted to study the occurrence of psychiatric problems in HIV-positive adolescents attending the HIV clinic at a tertiary care center in India.

METHODS

This cross-sectional study was carried out in the pediatric HIV clinic hospital from November, 2017 to March, 2019 after ethical clearance from institutional ethics committee. A sample size of 101 ALHIV with a 10% margin of error and a 5% level of significance was calculated based on the prevalence rates in previous studies [6].

ALHIV between 10 and 18 years were consecutively enrolled after taking written informed consent from them or the caregivers (either parent, or accompanying adult in case of orphans). Face-to-face interview was conducted with adolescents and their caregivers and detailed proforma was filled by the investigator. Information collected included socio-demographic data, World Health Organi-zation staging, route of HIV acquisition, and duration of treatment. Details of clinical examination, were recorded, and results of investigations including complete blood count, liver function test, kidney function test and CD4 count were collected from hospital records. The next part of the proforma included MINI KID questionnaire, in which questions were asked to adolescents and their caregivers from the modules addressing 19 psychiatric problems. The scale contained main diagnostic questions at the beginning of each module which if present, was further interviewed for details. All study participants who were positive for psychiatric disorders were referred to the psychiatry clinic at our hospital for further management.

Statistical analyses: Statistical analyses was done using Statistical Package for Social Sciences (SPSS) version

21.0. Quantitative variables were compared using Mann-Whitney test between the two groups as the data sets were not normally distributed. Qualitative variables were compared using the Chi-Square test/Fisher's exact test. A *P* value of <0.05 was considered statistically significant.

RESULTS

101 ALHIV (64.3% male), who were regularly attending the pediatric HIV clinic, were enrolled (***Table* I**). The mean (SD) age of the study group was 13.5 (2.28) years. All the patients were on ART. Of these, 26 (25.7%) were aware of the nature of their disease, its prognosis, and its effects on the body.

Twelve (11.8%) adolescents were screened positive for psychiatric disorders (***Table* II**); of which 5 (41.7%) were positive for two or more psychiatric disorders. The mean age of the screen-positive patients was 14.5 (2.0) years. No difference in proportion of adolescents with psychiatric disorder was according to age-group or sex.

Risk of being positive for at least one psychiatric disorder was higher in those whose parents were not alive [Father (24.1% *vs* 6.9%; *P*=0.02) or mother (38.1% *vs* 5%; *P*<0.001)]. Having knowledge about the disease was associated with a higher risk of positivity for a psychiatric disorder (26.9% *vs* 6.7%, *P*=0.006).

Ten (83.3%) screen-positive patients were in WHO stage 1 HIV while 2 (16.6%) belonged to WHO stage 3 HIV. Seven (53.8%) patients belonging to lower-middle socioeconomic class and 4 (6.3%) patients belonging to lower socioeconomic class were positive for psychiatric disorder as against 1 (4%) from upper-middle class (*P*<0.001). The mean duration of treatment for patients positive for a psychiatric disorder was 4 years [IQR:1.62, 8.25].

Table I Baseline Characteristics of HIV Positive Children (*N*=101)

Characteristics	*n (%)*
Age	
10-15 y	78 (77.2)
>15 y	23 (22.7)
Parents' HIV status	
Father positive	89 (88.1)
Mother positive	93 (92)
WHO stage	
I	93 (92)
II	1 (0.9)
III	7 (6.9)
Route of acquisition – Vertical	89 (88.1)
Duration of treatment	
<1 y	4 (3.9)
1-3 y	22 (21.8)
3-5 y	32 (31.6)
>5 y	43 (42.5)

Table II Psychiatric Disorders in HIV Positive Children (*N*=101)

*Psychiatric disorder**	*No. (%)*
Dysthymia	5 (4.9)
Conduct disorder	3 (2.9)
Oppositional defiant disorder	6 (5.9)
Adjustment disorder	3 (2.9)
Pervasive development disorder	3 (2.9)

**Other disorders like suicidality, (hypo) manic episode/ panic disorder, phobias, obsessive compulsive disorder, were also screened but no cases were found; One child (0.9%) each suffered from major depressive episode, post-traumatic stress disorder and attention deficit hyper-activity disorder; some participants had more than one disorder.*

DISCUSSION

The results of our study show that around 12% of ALHIV were suffering from psychiatric disorders of which dysthymia and oppositional defiant disorder were commonest. Further, it was seen that psychiatric disorders were significantly higher in ALHIV whose one parent had expired and in children who were aware of their disease status.

Various studies have shown that psychiatric illnesses are more common in children and adolescents living with HIV as compared to the general population [7-9]. Many of these studies have reported a higher prevalence (up to 50%) of psychiatric illnesses, much higher as compared to our study [2,10,11]. The lower prevalence in our study could be due to the lack of knowledge about the disease in the majority, lower stage of disease, appropriate HAART therapy, or cultural differences among communities.

The proportion of ALHIV with psychiatric illness was higher in older age group and in adolescents who knew about their disease. This was in contrast to previous studies [3,5] who found psychiatric morbidity to be common among patients between 10 to 15 years [2,11]. This might be due to a better understanding of the disease and associated stigma attached to the disease in older adolescents. Parental HIV status is known to affect psychiatric illness among CLHIV due to associated adversities of parental HIV and hence more common in children whose either parent had positive HIV status or whose either or both parents had died [12]. This was similar to other studies where the morbidities were

WHAT THIS STUDY ADDS?

- Psychiatric problems are common in adolescent with HIV who are older than 15 years, particularly in those who are aware of the disease or whose one of the parents has died.

common among those who had single mothers or single fathers or no parent [11,13].

Various other studies have also shown that depression was the major psychiatric problem in ALHIV [2,11,14]. In majority of these studies major depression was significantly associated with low CD4 count. The low prevalence of depression in our study may be due to higher CD4 counts in our cohort. Oppositional defiant disorder was observed similar to the previous studies [11].

According to the National Mental Health Survey 2016, the prevalence of mental disorders in 13 to 17 years' age group was 7.3%, most commonly depressive disorders; whereas, dysthymia and oppositional defiant disorder were commonest in our study [15].

The strengths of the study is the application of standard screening test by a single trained researcher. Since the study did not have a control group, the contribution of adolescent factors could not be separated out. Further, the age of disclosure of the diagnosis was not studied, which could have helped us to know the resilience of HIV positive patients.

The high prevalence of psychiatric problems in ALHIV emphasizes the need for screening of mental health illnesses, counselling, and referral during their visit to the HIV clinic. There is a need for larger studies to assess the psychiatric problems in ALHIV using definite psychiatric tools and study associated factors and course.

Ethical clearance: Institutional Ethics Committee of ABVIMS and Dr RML hospital; No.IEC/PGIMER/RMLH/446 dated October 30, 2017.
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