

A study to assess the quality of life (QOL) psychiatric morbidity in HIV/AIDS individuals before and after the initiation of highly active antiretroviral therapy (HAART) in a tertiary care hospital in Raichur

Sharanabasavaraj¹, Sunil Kumar², Pavan Kumar K^{3*}, Neeta T Gavimath⁴

¹SR, ⁴PG, RIMS, Raichur, Karnataka, INDIA.

^{2,3}Assistant Professor, Navodaya Medical College, Raichur, Karnataka, INDIA.

Email: kallimathpavan@gmail.com

Abstract

Since its first documentation in 1981, Acquired Immunodeficiency syndrome (AIDS) has been one of the dreaded and most researched diseases of today's era. It has been notified as a pandemic and since the beginning, almost 70 million people have been infected with the Human Immune Deficiency Virus with about 35 million people having died of AIDS. A multitude of factors interact to cause psychological stress in these individuals resulting in psychiatric morbidity, some of them being fatality of infection, fear of stigmatization, uncertainty about the future, avoidance by family and friends, concerns related to children, family and finances, etc. Depression and anxiety are the commonest clinical conditions diagnosed in. A follow up study of 64 patients above the age of 18 years, both male and female, with HIV/AIDS, attending the Anti-Retroviral Treatment Centre (ART) of the NMC, Raichur was undertaken. WHO-QOL (BREF) was used to assess their quality of life, prior to initiation of HAART. Quality of life increased across all four domains in the current study population with a maximum increase seen in the social domain (49.02 to 60.26), followed closely by the others. There was a statistically significant increase in the quality of life of the patients as CD4 increased (mean 48 to 56). The above findings indicate that with adequate adherence to HAART, individuals with HIV/AIDS are likely to respond with an increased physical wellbeing as well as psychological wellbeing. This would enable them to use more adaptive coping mechanisms, and improve their overall quality of life. These in turn would help them to sustain adherence to treatment altering the course of the illness in a favourable manner.

Key Word: AIDS, HAART, PLWHA, CD4.

*Address for Correspondence:

Dr Pavan Kumar K, Assistant Professor, Navodaya Medical College, Raichur, Karnataka, INDIA.

Email: kallimathpavan@gmail.com

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INTRODUCTION

The HIV epidemic in India was first recognized in 1986 around 27 years back and it still stands among the most serious public health problems in the country. Currently the primary drivers of HIV epidemic in India are unprotected paid sex/commercial sex worker, unprotected anal sex between men and injection drug users (IDU). The National adult (15-49 years) HIV prevalence was estimated at 0.28% (0.24%–0.34%) in 2010 and 0.27% (0.22%–0.33%) in 2012. Adult HIV prevalence among males and females was estimated at 0.34% and 0.23% in 2010 and 0.32% and 0.22% in

2012 respectively.¹With the advent of HAART in 1996, survival among infected individuals has improved significantly, and the perception of HIV/AIDS has shifted from that of a fatal to a chronic and potentially manageable disease. Potent combination ART, mainly consisting of three or more ARV drugs, has reduced the occurrence of HIV-related opportunistic infections and improved the patient's quality of life (QOL). Quality of life (QOL) is a term that is popularly used to convey an overall sense of well-being and includes aspects such as happiness and satisfaction with life as a whole. World Health Organization has defined QOL as-individuals perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, standards, expectations and concerns. QOL refers to the degree of excellence in a person's life at any given period that contributes to satisfaction and happiness of the person and benefits society. QOL is multifaceted, incorporating physical, material, psychological, social, and spiritual well-being. It is said to include overall feelings of well-being that are closely related to moral happiness and satisfaction. In addition, as health is generally seen as one of the most important determinants of overall QOL, it has been suggested that QOL may be uniquely affected by specific disease such as HIV/AIDS.HIV/AIDS patients face various psychological problems, such as stigma, poverty, depression, substance abuse, and cultural beliefs, which can affect their QOL not only from the view of physical health but also from that of mental and social health, which can cause problems that affect important activities and interests of the persons. There is a relationship between ART and quality of life of people living with HIV and AIDS, and several studies have reported a strong positive association between ART and improved quality of life in different domains among people living with HIV and AIDS in both developed and developing countries.

MATERIALS AND METHODS

A prospective study was conducted in NMC, Raichur. All the Patients who attended HIV/AIDS Anti-Retroviral Treatment Centre (ART) of the KIMS Hospital and Research Centre between February 2014 to January 2015, were included in the study. A total of 64 patients were registered during the study period after obtaining the consent from the participants and ethical clearance from the concerned institution. Individuals who are aged between 18-60 years and are HIV positive (or AIDS), who are to be initiated on ART and are in clear sensorium were included in the study Data was collected in the below said questionnaire format. who-quality of life bref scale(who-qol bref)² The WHOQOL-

100 quality of life assessment was developed by the WHOQOL Group. The WHOQOL- BREF produces a quality of life profile. It is possible to derive four domain scores. There are also two items that are examined separately: question¹ asks about an individual's overall perception of quality of life and question² asks about an individual's overall perception of their health. The four domain scores denote an individual's perception of quality of life in each particular domain. Domain scores are scaled in a positive direction (i.e. higher scores denote higher quality of life). The mean score of items within each domain is used to calculate the domain score. Mean scores are then multiplied by 4 in order to make domain scores comparable with the scores used in the WHOQOL-100. The first transformation method converts scores to range between 4-20comparable with the WHOQOL-100. The second transformation method converts domain scores to a 0-100 scale.

RESULTS

Majority of the study population in our study were between the age group of 31- 40 years (57.8%) followed by 21-30 yrs (20.3%). Only 9.4% of the subjects were aged above 50 years, indicating the burden of the disease in the middle age group people and leading to the economic burden to the family. Only 20.3% of the patients who reported to the ART center were illiterate Majority of the people in this are suffering from psychiatric morbidity (61%).39% had not met any criteria for psychiatric morbidity.

Table 1: Distribution of QOL (pre ART)

| QOL pre ART | Frequency | Percentage |
|-------------|-----------|------------|
| 31-60 | 2 | 3.1 |
| 61-90 | 51 | 79.7 |
| >90 | 11 | 17.2 |
| Total | 64 | 100.0 |

Majority of the people had QOL score of range between 61-90 (79.7%). 11(17%) patients scored a QOL score of more than 90.

Table 2: Quality of life domain scores of pre and post HAART patients obtained from WHOQOL- BREF questionnaire (n=64)

| QOL domains | Mean QOL score ± SD | |
|---------------|---------------------|----------------|
| | Pre HAART | Post HAART |
| Physical | 48.74 ± 15.683 | 55.47 ± 8.609 |
| Psychological | 45.33 ± 12.486 | 51.65 ± 7.222 |
| Environmental | 49.84 ± 13.517 | 56.28 ± 11.437 |
| Social | 49.02 ± 9.378 | 60.26 ± 9.516 |

Effect of HAART shown clearly numerically with improvement in all domains of QOL with maximum improvement in environmental domain

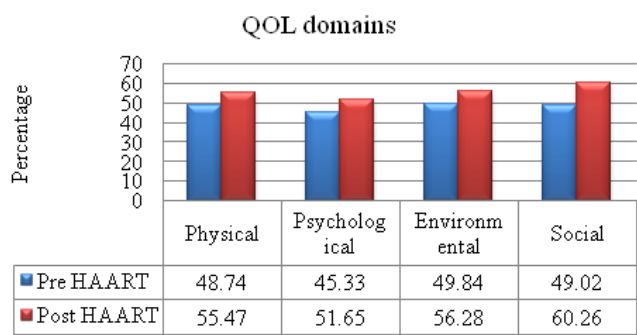


Figure 1: Quality of life domain scores of pre and post HAART patients obtained from WHOQOL- BREF questionnaire (n=64)

Table 3: Comparison of CD4 count with QOL

| CD4 count | QOL | | | Total |
|-----------|----------|-----------|-----------|----------|
| | 30-60 | 61-90 | >90 | |
| <250 | 1(2.4%) | 34(82.9%) | 6(14.6%) | 41(100%) |
| 250-350 | 0 | 16(80%) | 4(20%) | 20(100%) |
| >350 | 1(33.3%) | 1(33.3%) | 1(33.3%) | 3(100%) |
| Total | 2(3.1%) | 51(79.7%) | 11(17.2%) | 64(100%) |

$\chi^2 = 11.013, df=4, P=0.026$

Majority (82.8%) of the study patients were suffering from HIV/AIDS illness for a period of 1-5 years, with no history of taking ART treatment. It was also interesting to note that around 6.3 % of the patients were suffering from the illness for more than 10 years and living without ART. 64.1% of the study population who reported for ART had a CD 4 count less than 250 cells/mm³, indicating the disease has been progressed in them and the time lag since the acquiring the infection and the arrival for ART. Most of the study group have CD4 count of less than 250cells/ML (41/64, 64%).only few number had CD4 of more than 350cells/mL (3/64). Most of them with CD4 less than 250 had QOL in the range of 30-90 and only 6 patients have scored more than 90(6/41).

Table 4: Comparison of pre and post HAART CD4 counts with QOL

| | Mean | N | Std. Deviation | Difference | t | df | P value |
|----------|--------|----|----------------|------------|--------|----|---------|
| Pre CD4 | 214.61 | 63 | 101.120 | 163.536 | 12.732 | 62 | .000 |
| Pre QOL | 48.07 | 63 | 11.052 | | | | |
| Post CD4 | 296.54 | 57 | 105.318 | 238.140 | 17.197 | 56 | .000 |
| Post QOL | 56.05 | 57 | 6.790 | | | | |

The study shows that there is an improvement proportional in the QOL as the CD4 count increases and is statistically significant

DISCUSSION

The HIV pandemic has left an impact on the world at large as probably no other. Individuals diagnosed with the illness are subjected to immense stress, making them vulnerable to a plethora of psychiatric illnesses. The prevalence of psychiatric morbidity in individuals with HIV/AIDS has been found to be high worldwide. It has been found that 50% and 33% of patients had a past-year and past-month diagnosis in two internationally conducted studies. (Bradley N. Gaynes, Brian Wells Pence, Joseph J. Eron Jr, and William C. Miller).³ The scenario is not much different in India as well, with an ICMR study that looked at 70 HIV positive patients and found psychiatric morbidity in 49% of them.⁴ The prevalence of psychiatric morbidity in our study appears to be higher (61%) than in the other studies. The hospital where the study is done being a tertiary care centre, located in a city, with a large HIV/AIDS care centre, probably catering to the severely ill patient, could explain the above findings. Quality of life (QOL) is a term that is used to convey an overall sense of well-being, happiness and satisfaction with life as a whole, and is multifaceted, incorporating physical, material, psychological, social, and spiritual well-being. It is suggested that QOL may be uniquely affected by specific disease such as HIV/AIDS. Quality of life varies across domains in different studies. A study done in south India in 2008 on QOL in HIV/AIDS patients, revealed that the mean score (0-100) of domains was highest for the environmental domain (47.63), followed closely by psychological domain (47.4), then physical (46.37), and lowest for social (43.37) Nirmala B *et al*.⁵ It was found that the environmental domain had the maximum QOL score of the four domains. As the education of the patients increased, they had better psychological domain scores (Liu C and Weber 2006).⁶ Those with AIDS report a lower HRQOL than do persons with other chronic conditions, such as cancer or depression. A study had mean score highest for social domain in four domains of QOL. Significant difference of quality of life was observed in the physical health domain scores between patients in the clinical categories i.e. asymptomatic, early symptomatic and with AIDS defining illness.⁷ In concordance with most studies, the current study too found that almost 80% of the sample population had a moderate quality of life, pre HAART, ranging between 60–90, with only about 17% having an overall better quality of live (>90). In a clinical condition such as HIV/AIDS, all areas of an individual’s living are greatly affected. Added to the physical ill health, the person has to face a great deal of psychological distress. Coming to terms with the

diagnosis, being at the most productive stage of one's life and not being able to provide for the family, and facing the stigma and discrimination associated with the diagnosis, lay a great deal of stress on the individual. It is only understandable that the individual can have a moderate quality of life at best. Administering of HAART appeared to make a significant difference in the quality of life of these individuals. A study by Campos Lorenza Nogueira *et al*⁸ revealed that the overall quality of life was classified as 'very good/good' by 66.4% of the participants four months after initiating treatment. Similarly another study by Liu.C, Weber.K.⁶ in 2006 showed that after adjusting for demographic, socioeconomic, biological and clinical variables, HAART had small but significant short-term improvements on changes in summary QOL, role functioning, social functioning, cognitive functioning, pain, health perception and perceived health index. Adherence to HAART has been found to improve psychiatric morbidity, as also the quality of life of the HIV/AIDS individual. This was clearly seen in a study by Ladefoged K⁹ which showed an increase in CD4 counts, decreased virologic load with good adherence to HAART, and a significant improvement in QOL. Similar findings were seen in a study done by Larson BA *et al* and another study by Luigi G¹⁰. 90% of the population in the current study were adherent to medication, which probably played a major role in improving their quality of life. In keeping with the above studies, assessment post HAART revealed an overall increase in the quality of life of all the patients in the current study, more so in the environmental domain. The physical, psychological, and social domains also saw an increase in scores. With the physical health of the individual improving following medication, the psychological status tends to improve, along with improvement in overall wellbeing, helping the individual to be financially productive, and participate to a greater extent in social interactions. All these factors would promote a happier home environment contributing to an improvement in their QOL

CONCLUSION

HIV/AIDS as an illness probably causes the greatest stress on the afflicted and their family members. Along with the burden of illness, financial issues and interpersonal issues is the stigma and discrimination associated with it that further worsens the stress. It is thus understandable that the individual is more prone to develop psychiatric morbidity. Early identification of

existing psychiatric morbidity and treatment when the individual is first diagnosed to have HIV/AIDS would go a long way in improving wellbeing. The point at which the individual requires HAART must be handled with care, as the initiation of treatment is perceived as a worsening of the disease process. Adequate psychological intervention in the form of delivering adequate knowledge, correcting misconceptions, and psychological support at this time would be protective against the development of adjustment disorders. It would also enhance adherence to HAART which is very crucial for clinical improvement. This in turn would enhance psychological wellbeing, improve the patient's coping and thereby raise the overall quality of life.

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