FREQUENCY AND REASONS OF DELAYED INITIATION OF TREATMENT AFTER DIAGNOSIS OF HUMAN IMMUNODEFICIENCY VIRUS (HIV): A CROSS SECTIONAL STUDY

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Abstract

Background and Objective: The rise in incidence and prevalence of cases of Human immunodeficiency virus (HIV) has made it a disease of public health concern especially in under-developed countries. Timely diagnosis and initiation of treatment, the only effective strategy to break the chain of transmission in the community, is a caveat in the measures taken for its prevention. The objective of this study was to determine frequency and the reasons behind delay in initiating treatment after being diagnosed with HIV among patients presenting to a public sector hospital.

Methods: This cross-sectional study was conducted in the HIV center of Aziz Bhatti Hospital, Gujrat for six months after approval from ERB. About 200 diagnosed HIV patients fulfilling the selection criteria were included in the study after an informed consent. Data were collected by personal interviews and information regarding their timing of initiation of therapy and reasons behind delay in treatment were noted in a questionnaire. Data entry and analysis was done using SPSS version 23.0 and cross tabulation was done keeping p-value <0.05 as significant.

Results: Among 200 study participants, mean age was 26.5 ± 5.68 years including 126 (63%) males and 74 (27%) females. About 34 (17%) of patients were found to have a delay in initiation of treatment for more than 6 months. Patients reported multiple reasons behind the delay in initiation of treatment the most frequent was being in denial in which they did not believe the test results 32 (94%) followed by difficulty in accessing health care 28 (82.3%). Age was found to be significantly related with delay (p= <0.001) while relationship of gender with delay in treatment was found to be insignificant.

Conclusion: It can be concluded that a considerable proportion of patients diagnosed with HIV delay their treatment because of lack of acceptance of results or access to health care. Proper educational session of these patients along with increasing the accessibility to health care facilities can result in timely management and better outcomes in these patients.

Keywords: Human Immunodeficiency Virus, Acquired Immunodeficiency Syndrome, Delayed Treatment

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Human Immunodeficiency virus (HIV) infection leading to Acquired Immune Deficiency Syndrome (AIDS) has become a disease of public health concern over a period of time. Annually, approximately one million deaths with HIV are reported with around 37 million cases. About 5 million deaths due to HIV have been recorded world over till 2015.[1] A research conducted in Pakistan reported a 14.2% rise in deaths due to HIV in Pakistan every year.[2] It can spread either by horizontal transmission (by unprotected intercourse,

contamination of blood transfusion or using shared contaminated syringes in substance abusers) or through vertical transmission (maternal to fetal amid pregnancy or during parturition or breast feeding). Patient might stay asymptomatic for decades or might start developing flu like symptoms but remains a source of disease transmission in all phases.[2] No definitive cure or vaccine is available for this condition till date. The current recommendation suggest the timely and earliest initiation of treatment without any delay as the affected patients may not survive beyond the first decade if remain untreated.[1]

The reasons behind delay for the commencement of HIV treatment are multiple. It is observed that almost 25 % of patients infected with HIV remain unaware of their infection which not only leads to delay in initiation of treatment but also the spread of disease. Other factors associated with delay in initiating treatment even after being diagnosed with HIV include socioeconomic factors like poverty, unemployment and lack of education, all of which also tend to increase the spread as well.[3] Lack of treatment occurs more commonly among low-socioeconomic population and intravenous drug abusers (IDUs). The IDUs that have sexual contacts to Male sex workers and transgenders are primarily the cause behind HIV's escalation and defective treatment initiation in majority of the areas in Pakistan.[4]

It is said that starting highly active anti-retroviral therapy (HAART) is vital for reducing mortality and morbidity. Approximately 15 % of patients after being diagnosed with HIV report a delay of minimum six months prior to consultation or treatment. Many patients tend to deny their possibility of being HIV positive and show a lacking towards perceiving the need for seeking medical advice / care. A study reported that 23% of patients with HIV delay seeing medical care among whom majority of patients deny being positive as they are asymptomatic therefore didn't need to opt treatment. Furthermore, some HIV positive patients found it difficult to access the medical care, while some did not want to share the results because of stigma associated with HIV in the society.[5]

All these reasons coupled with societal pressure causes patients to either not get themselves tested in the first place or get treated. Overall, the reasons behind delaying of treatment are found to vary with populations and local societal behaviors. Since no local study has reported the cause behind delay in initiation of treatment, therefore this study was carried out to determine the frequency and reasons behind the delay in initiating treatment after being diagnosed with HIV.

METHODS

This analytical cross sectional study was carried out for a period of six months i.e. August 2021 to January 2022 at the HIV Center, Aziz Bhatti Hospital, Gujrat after approval of the study from the Ethical Review Board (ERB). A total of 200 HIV positive patients detected by HIV RNA through PCR of either gender aged 15 to 50 years were included in the study after an informed consent using non-probability purposive sampling technique. Patients not giving the consent for partici-pation in the study, on HAART treatment or those that got medical advice / treatment from another medical center (determined by history and clinical records) were all excluded from the study.

Baseline demographics such as age, gender, time duration between diagnosis and initiation of therapy was noted and delayed initiation of treatment was labeled if this duration was more than 6 months. In addition, the reasons behind delay were also inquired and noted on a pre-tested structured questionnaire filled by the research team after conducting one to one per-sonal interviews in a setting ensuring privacy and confidentiality.

Data was entered and analyzed through SPSS version 23.0. For quantitative variables, mean and standard deviation was reported while for qualitative variables, frequency and percentages were recorded. Data was stratified according to age and gender. Chi square test was applied for determining significance of post-stratification keeping p-value of <0.05 as statistically significant.

RESULTS

From the total of 200 patients included in the study, the mean age was 26.48 ± 5.65 years, 135 (67.5%) were below 30 years while 65 (32.5%) were

above 30 years of age. 129 (64.5%) of patients were male while 71 (35.5%) of patients were female.

Regarding the frequency of patients with delayed initiation of treatment for HIV, 34 (17%) of patients were found to have a delayed initiation of treatment for more than 6 months (Fig 1). On exploring the reasons of delay in these patients, multiple reasons were seen for the delay as shown in fig 2.

On cross tabulation it was seen that age was significantly related with delay in initiation of treatment while gender has no significant relationship with the delay in initiation of treatment. (table 1)
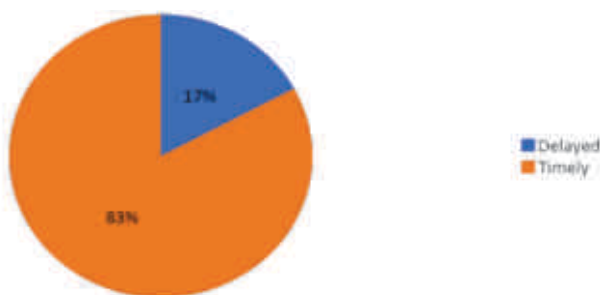

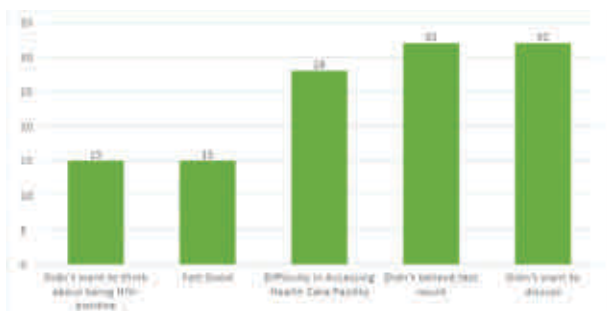**Figure 1:** *Frequency Distribution for Delay in Initiation of Treatment*

Figure 2: *Reasons for Delay in Starting of Treatment (n=34)*

Table 1: *Relationship of age and gender with delay in starting of treatment (n=200)*

VARIABLES		Delay in Initiation of Treatment				p Value
		No		Yes		
		Fre-quency	%	Fre-quency	%	
Age Category	Less Than 30	128	94.8%	7	5.2%	p<0.001
	More Than 30	38	58.5%	27	41.5%	
Sex	Male	100	79.4%	26	20.6%	0.074
	Female	66	89.2%	8	10.8%	

* p value statistically significant

DISCUSSION

Many factors have been associated with delay in attaining treatment of HIV. In our study, 34 (17 %) of patients were found to have delayed treatment of HIV. The major reason for delay in starting HIV treatment in our study was that majority of patients did not believe their test result nor wanted to discuss about their HIV status, followed by difficulty in accessing health care facility.

A study in Pakistan observed a trend where the frequencies of patients with HIV as well as with delay in initiation of HIV treatment due to various causes were being increasingly reported, however the current facilities available for managing and treating patients with HIV has remained inadequate not only in the rural areas but also in the urban areas as well.[6]

In a study conducted in Larkana, a screening for HIV was conducted which showed that 3% of the study population was having HIV with majority of the patients reported to be under 15 years of age.[7] These are results are similar to the results of our study where majority of the patients belonged to age group less than 30 years.[7] The major risk factors causing these high transmission rates were usage of shared intravenous needles, unsafe delivery practices, poor screening of blood in blood banks, improper collections and storage with unhygienic hospital waste management systems.[7]

In another study, it was reported that approximately 74.9% HIV positive patients have a delay in initiating treatment.[8] in another study conducted in Lahore, a delay in initiation of the treatment was found to be 28.5 % and the most common reasons for delay was feeling of being healthy as the HIV was in asymptomatic stage followed by fear of stigmatization, anticipated discrimination and not willing to discuss test result.[5] In another study it was found that approximately 42.6 % of patients with HIV had delayed treatment initiation because they did not have enough time for visiting HIV clinic to get treatment.[9] It is observed that one reason for delay in starting HIV treatment is due to the fact that many think that it takes a long and complex, time-consuming process that comprises of many appointments, multiple general physical

examinations and much of the time being spent in the waiting room for consulting clinician.[9]

Negative attitude of public coupled with ideas and viewpoints regarding HIV disease may explain a delay of as high as 37.6 % as reported in another study with major reason as reluctance to talk or discuss about their HIV positive status, coupled with fear of discrimination and becoming a stigma within community.

Although our study determined the frequency and reasons behind delay in initiation of treatment for HIV, yet the major limitation of the study were selection and observer bias and the fact that the study was carried out at a single center with limited sample size, therefore a multi-centered study with greater sample size would be more revealing and provide more insight to the subject matter.

CONCLUSIONS

It can be concluded from this study that a noticeable frequency (17%) of patients with delayed initiation of HIV treatment after diagnosis were observed with denial as major reason behind delay in initiation of HIV treatment followed by difficulty in accessing health care facility for attaining treatment. This highlights the importance of holistic approach in management of these patients focusing on counselling of these newly diagnosed patients and their families so that they can overcome their denial phase along with better coping strategy, acceptance and social support from their family resulting in improved quality of life.

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