QUALITY OF LIFE AMONG HIV-INFECTED PATIENTS RECEIVING ARV TREATMENT AT NGHE AN FRIENDSHIP GENERAL HOSPITAL IN 2019

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ABSTRACT

Antiretrovaral treatment helps HIV-infected people recover their immune system, reduce the risk of dangerous opportunistic infections, improve the quality of life, and prolong life span. ***Objective:*** *To evaluate the quality of life in HIV-infected patients who were receiving antiretrovaral treatment at Nghe An Friendship General Hospital in 2019.* ***Method:*** *A cross-sectional descriptive design was conducted among 226 HIV-infected patients receiving treatment and managing by the Department of Tropical Diseases, Nghe An Friendship General Hospital from March 2019 to May 2019. The EQ-5D-5L scale and the visual scale (VAS) with score range of 0 to 100 were used for measured.* ***Results:*** *The rates of patients who had general satisfaction with their quality of life by fields of self-care, daily activities, pain, anxiety and mobility without problems were 88%; 92%, 89% 75% and 65%, respectively. The score of life quality by EQ-5D-5L and by VAS were 92.7 and 76.8, respectively. Factors related to the quality of life of patients were the place of residence, sex, the number of T-CD4 cells and the viral load.* ***Conclusion:*** *The quality of life of HIV-infected patients receiving ARV treatment within the study was high. This study result provides an additional evidence regarding the quality of life of patients related to ARV-treatment.*

Keywords: *HIV / AIDS, ARV, Nghe An Friendship General Hospital*

1. INTRODUCTION

Human immunodeficiency viruses (HIV) is one of the leading causes of disability and mortality worldwide and the challenge for global public health systems. In 2017, there were 1.8 million people newly infected with HIV and Acquired immunodeficiency syndrome (AIDS), 36.9 million people living with HIV and AIDS (PLWHA), and 940,000 deaths related to life-threateninginfections and cancers [1].

Along with sufficient care and treatment, treatment provision, quality of life (QoL) has been considered as an important outcome indicator in holisticcare for HIV-infected people [2]. Antiretroviral therapy helps HIV-infected people recover their immune systems, reduce the risk of dangerous opportunistic infections, improve their quality of life (QoL), and prolong life span [3]. When HIV-infected people prescibed with Antiretrovaral (ARV) do well adherence to treatment, this not only helps improve their quality of life but also reduce the transmission of HIV to others.

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Nghe An is one of the key provinces of the country on the HIV / AIDS epidemic, by June 2018, there were 9,594 people detected to be HIV-infected in the whole province; At present, nearly 5,000 people are still alive, of which 79.6% are on ART [4]. The quality of life has been shown to be related to the clinical and immunological characteristics of HIV / AIDS patients, including opportunistic infections, immune status and viral load. Moreover, the quality of life includes the broader aspects of people living with HIV / AIDS, such as psychology, interpersonal relations, society, and the environment. Therefore, measuring the quality of life can better reflects the change and effectiveness of treatment among HIV / AIDS patients. Therefore, this study aimed to evaluate the quality of life in HIV-infected patients who were receiving antiretrovaral treatment at Nghe An Friendship General Hospital as adding to evidence of the safety and effectiveness of ARV treatment.

2. RESEARCH METHOD

HIV patients were on ART at the Department of Tropical Diseases, Nghe An Friendship General Hospital from March 2019 to May 2019. They were treated at the outset and being treated at the dose stabilization stage.

The cross-sectional descriptive study with analyses was conducted, interviewing patients and looking up information in the patient's medical records were combined.

The sample size was calculated using the formula for calculating the average value of the population with δ: The standard deviation of scores on the quality of life is 0.02 [5]. The systematic sampling method with distance k = 802/168 = 4 was selected. The sample size of the study was 226 patients.

The study was approved by Nghe An Friendship General Hospital and had the patients' consensus. The personal information of the study patients was confidential and only used for research purposes.

The quality of life of patients was measured with the tool of EQ-5D-5L scale and the visual scale (VAS) with scores from 0 to 100. Based on the results of questionaire EQ-5D-5L, compared with the scale table of life quality measurement in Viet Nam, the scores and the coefficient (level) of life were calculated. Data were analyzed by SPSS 20.0 software.

3. RESULTS

3.1. Demographic characteristics of research subjects

Table 1. Age and gender of research subjects (n = 226)

Demographic characteristics		Number of subjects	Percentage
Sex	Male	143	63.3
	Female	83	36.7
Age (year)	21-29	23	10.2
	30-39	104	46.0
	40-49	81	35.8
	≤ 50	18	8.0

The average age of patients is 38.8 ± 7.5, the age group with the highest rate is 30-39 (46%), 63.3% were men.

3.2. Quality of patients' life

The patients' quality of life regarding fields of living and measured by the QoL 5D-5L and VAS were demonstated in Figure 1 and Tables 2-5 as the follows.

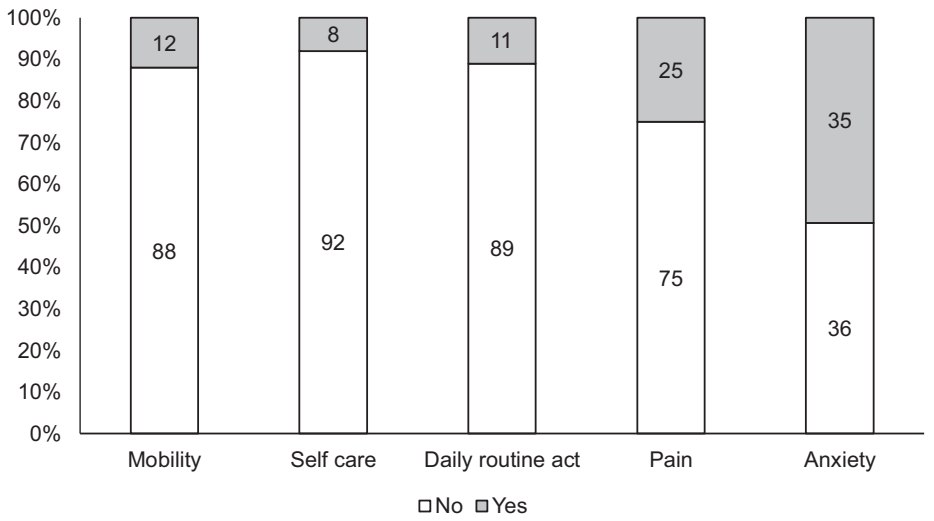

Figure 1. Quality of life based on fields

Figure 1 shows the percentages of HIV patients facing difficulties in the fields mobility, self-care, daily activity, pain and anxiety were 12%, 8%, 11%, 25% and 35%, resspectivly.

Table 2. Quality of life by locations

Catalog EQ-5D	Mountain		Plain		Urban		Total		p
	n	%	n	%	n	%	n	%	
Moving around									
With difficulty	10	25.6	8	10.1	8	7.4	26	11.5	0.008
Without difficulty	29	74.4	71	89.9	100	92.6	200	88.5	

The rate of patients having difficulty moving around in mountainous areas is higher than those in plain and urban areas (p = 0.008).

Table 3. Quality of life by gender

Catalog EQ-5D	Female		Male		Total		p
	n	%	n	%	n	%	
Anxiety/ Sadness							
Yes	40	48.2	40	28.0	80	35.4	P=0.003; OR=2.4
No	43	51.8	103	72.0	146	64.6	CI95% (1.4-4.2)

The rate of female patients having the feeling of anxiety and sadness is 2.4 times higher than that of male patients (p = 0.003; OR = 2.4; CI95% (1.4 - 4.2).

Table 4. Quality of life compared by the number of T-CD4

Items EQ-5D	<200		200 – 499		≥500		Total		p
	n	%	n	%	n	%	n	%	
Daily activities									
With difficulty	13	61.9	6	7.6	4	3.2	23	10.2	**0.000**
Without difficulty	8	38.1	73	92.4	122	96.8	03	89.8	

(* Unit: cell / mm3)

The rate of patients with low T-CD4 having difficulty doing daily tasks is also higher than the other two groups (p <0.05).

Table 5. Quality of life by the viral load

Items EQ-5D	<200		200 – 1000		≥1000		Total		p
	n	%	n	%	n	%	n	%	
Self-care									
With difficulty	14	6.8	0	0.0	3	37.5	17	7.5	**0.003**
Without difficulty	191	93.2	13	100.0	5	62.5	209	92.5	
Daily routine									
With difficulty	11	5.4	8	61.5	4	50.0	23	10.2	**0.000**
Without difficulty	194	95.6	5	38.5	4	50.0	203	89.8	
Scores of QoL 5D-5L	93.3		88.3		85.8		**92.7**		**0.018**
Scores of VAS	77.4		73.4		66.8		**76.8**		**0.045**

The rate of patients with viral load from 1000 having difficulty doing daily tasks and self-caring is higher than the other two groups in terms of statistics (p <0.05). There is a difference in terms of statistics between the scores of QOL and VAS based on the patient's viral load. The higher the viral load is, the more difficult it is for patients to move around, take care of themselves, lead daily life, feel pain, and experience anxiety.

4. DISCUSSION

Based on the study of HIV patients at Nghe An Friendship General Hospital, the results showed the rates of patients facing diculties of moving around, self-caring and doing daily living activities life was no more than 12% compared to 20% of those studied in Hanoi and Nam Dinh, which was lower [6]. However, a high rate of mental health problems from the patients after treatment has been reported: 25% of patients often experience pain and discomfort and 35% have problems of depression, anxiety and sadness. This result is lower than previous studies on HIV patients conducted in 2012

on 1016 patients on ARV in Hanoi, Hai Phong and Ho Chi Minh City [7] and 1131 patients in Hanoi and Nam Dinh, in which the authors showed that 43.6%; 37.7% had problems of pain and discomfort and 61.9%; 45% had the feeling of anxiety. This difference is that those studies were conducted among a wide range of hospitals, including central hospitals where patients of serious illness, terminal illness were being treated, thus the patients' feelings of pain and anxiety are more than those at Nghe An General Hospital of Friendship, mainly at the first stage.

In this study, there was no evidence of the impact of living conditions on quality of life of HIV patients in terms of self-care, anxiety, daily life and pain. This is also consistent with similar studies available in Viet Nam that have not yet shown the impact of housing factors on the four above-mentioned aspects of HIV-infected people. However, there is a difference in moving around depending on place of residence, it is more difficult for patients living in mountainous areas to move around than patients in plain and urban areas ($p < 0.05$). . Nghe An is one of the largest provinces in the country, converging every terrain of the country from the sea, the plain, to the high mountains. Mountainous districts such as Ky Son, Tuong Duong, Que Phong are 250km far from Nghe An Friendship General Hospital. The mountain roads are winding; in the rainy season, there is often serious erosion; in the sunny season, it is scorching hot, the temperature is often above 400C, the road dust is dense. As a result, the patients in mountainous areas have difficulty moving to get to the treatment facilities. This is a distinctive feature of HIV patients in Nghe An compared to patients in other regions, where there is flat terrain and convenient roads such as Nam Dinh, Ho Chi Minh City ... To expand effectiveness of ARV treatment program in Nghe An, ARV facilities for outpatients in mountainous districts should be replicated to reduce difficulties for patients in adherence to treatment.

The research results also showed that women do not benefit from ARV, equally compared to men. Sex plays an important role in the difference of health effects whether directly or indirectly. When on ART, HIV / AIDS female patients also have more psychological problems than men. Similarly, in this study, the rate of female patients suffering from anxiety is 2.4 times higher than that of men ($p = 0.003$; OR = 2.4; CI95% (1.4 - 4.2).). In HIV-affected families, women are the most vulnerable because they have an important role in maintaining family life, having children, bringing up children, as well as caring for their HIV-positive husbands.

The results of this study show that the quality of life of women is higher than that of men in terms of self-care, pain / discomfort, daily life, similar to that of patients in Nam Dinh and Hanoi [6]. Female patients look after themselves better and are less painful than male patients. It can be explained by the female sex's characteristics, they not only have to take care of themselves but also take care of the whole family, so even when HIV infected, they take better care of themselves; and their threshold to suffer pain and discomfort is better than men. The rate of female patients having anxiety, sadness is 2.4 times higher than male patients ($p = 0.003$; OR = 2.4; CI95% (1.4 - 4.2). Most female patients are married and have children so when infected with HIV, they have a lot of worries about their families and children, their daily life, and their future if their illness gets worse and if they die of AIDS. This result further confirms the previous research evidence. Moreover, it shows the impact of social roles of women in the family and the community on their quality of life.

The results also show that the clinical and immune status of the patients is closely related to the quality of life. Patients with early clinical or good immune status, high T-CD4 cells and low viral load have a higher quality of life than those with worse conditions. This is similar to previous studies, showing that HIV / AIDS patients with poor clinical and immune response are often accompanied by low quality of life, especially in terms of physical strength and daily life. It is easy for patients with low immune cells, high viral load to get opportunitically infected, such as physical and mental decline, so their quality of life gets lower. It is also statistically significant that patients with high viral load, low T-CD4 cells have lower quality of life in terms of daily life and self-care compared to patients with low viral load, high T-CD4 cells ($p < 0.05$).

5. CONCLUSION

The patients' quality of life is high in terms of mobility, self-care, daily life, pain and anxiety (88%; 92%, 89% 75% and 65% without difficulty). The score for the quality of life EQ-5D-5L: 92.7; VAS: 76.8%). The factors related to the quality of life of patients: Patients living in mountainous areas have more difficulty in moving around than patients living in plain and urban areas ($p = 0.08$). The rate of female patients with anxiety and sadness is 2.4 times higher than the male ones ($p = 0.003$; OR = 2.4; CI95% (1.4 - 4.2). The patients with T-CD4 cells < 200 have more difficulty in daily life than those with T-CD4 above 200 ($p = 0.000$). The patients with viral load> 1000 have more difficulty in self-caring and daily life than those with low viral load ($p < 0.05$). There was a difference between the score for quality of life EQ-5D and VAS of patients compared to the viral load; the patients with low viral load have a higher score on quality of life than those with high viral load ($p < 0.05$).

This study result provides an additional evidence regarding the quality of life of patients related to ARV-treatment and may help to enhance patients' adherence to Antiretrovaral treatment.

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