

Original Research Article

Effect of Conselvation on Compliance and Response of ARV Therapy in HIV / AIDS Patients in H. A. Sulthan Daeng Radja Bulukumba Hospital

Sri Wahyuni^{1*}, Andi Zulkifli¹, Yahya Thamrin², A. Arsunan Arsin¹¹Departement of Epidemiology, Public Health Faculty, Hasanuddin University, Indonesia²Departement of Health and Work Safety, Public Health Faculty, Hasanuddin University, Indonesia

*Corresponding Author

Sri Wahyuni

Abstract: HIV is a virus that attacks the immune system, one of the therapies that suppresses the replication of the HIV virus is ARVs that must be used for life so compliance is needed to get successful therapy. Compliance during therapy requires support and motivation in the form of assistance during therapy. This study aims to determine the effect of counseling on adherence and therapeutic response in HIV / AIDS sufferers in RSUD (Regional General Hospital) H. Sulthan Daeng Radja Bulukumba. This study used a quasi-experimental method with a nonrandomized control group pretest posttest design. Sampling by Purporsive sampling about 48 ODHA. Data were analyzed univariate on characteristics and bivariate for variables with McNemar test for compliance and Wilcoxon test for therapeutic response. The results showed the highest respondent characteristics of the two study groups in the productive age group, 25-45 years old 91.6% male sex 79.2% married marital status 45.8%, the highest education level high school 70.8%, employment status entrepreneur 45.8% and duration of therapy 1-5 years 83.4%. There are significant differences in the compliance of respondents after getting counseling at 93.8% with the results of statistical tests obtained p value = 0,000 which means that there is an influence of counseling on adherence to HIV / AIDS patients in RSUD H. Sulthan Daeng Radja. The response of ARV therapy to CD4 values shows that there is a significant effect with a value of p = 0,000 in Wilcoxon.

Keywords: Counseling, Compliance, PLWHA, ARV and CD4.

INTRODUCTION

HIV is a virus that attacks the immune system which results in the condition of the body becoming weak. A collection of symptoms of the disease that arises due to infection with Human Immunodeficiency Virus (HIV) called AIDS (Acquired Immuno deficiency syndrome. AHIV / AIDS is a global problem that is almost faced throughout the world today and no country has been declared free (Department, 2016)

In 2017 there were 940,000 cases of AIDS-related deaths worldwide. The Asian case data is in second place with 3.5 million cases with a percentage of 9.52% after Africa (Azanella, 2018). Data from the Directorate General of P2PL of the Indonesian Ministry of Health, The cumulative number of HIV infections reported up to June 2018 was 301,959 (Ministry, 2016). South Sulawesi Province as an East Indonesia region was once the second largest province after Papua in

terms of the prevalence of HIV-AIDS. Distribution of cases by region in South Sulawesi, most of them are in Makassar City, Pare-pare, Gowa and Bulukumba (Soth Sulawesi, 2016)

P2PL Field Data and District AIDS Commission Bulukumba recorded the number of HIV sufferers in 2017 as many as 15 people and 6 people with AIDS, as many as 5 cases the number of cases until September 2018 a total of 251 cases with HIV positive incidents in January-November 2018 as many as 38 cases (Health Department, Bulukumba Regency, 2017) while the data from VCT at the HA. Sulthan Daeng Radja Hospital incident up to September 2018 to 22 VCT clinics while carrying out ARV therapy in VCT was 48 cases (Regional General Hospital, Bulukumba Regency, 2017)

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The prognosis of HIV infection has improved after the discovery of Highly Active Antiretroviral Therapy (HAART) or a combination of antiretroviral (ARV) drugs that have high activity in 1996 (Haryatiningsih Ari, 2017). Antiretroviral therapy (ARV) is a therapy that is carried out by patients taking drugs for life and on time to suppress viral replication in the blood (Andriani Aida, 2018). A tight schedule for taking HIV drugs should not be missed in order to suppress the number of viruses in the body for that patient compliance / discipline is needed in undergoing ARV therapy. If it is not disciplined, the drug will become resistant to the body (Hartoyo Mugi, 2014). Drug adherence is one of the important aspects in assessing the success of ARV therapy, that in order to achieve optimal levels of viral suppression at least 90-95% of all doses cannot be forgotten, while the data show the level of achievement of antiretroviral treatment in Indonesia is still very low at 40% - 70%, still below the national target with 95% compliance (Mariam siti,dkk, 2011).

Adherence counseling to ensure the readiness of patients to start ARV therapy as well as further understanding and responsibility (including: usefulness, therapeutic benefits, possible toxicity, lifelong therapy, adherence) (Mariam siti,dkk, 2011). Non-compliance is related to viral mutations which will lead to drug resistance as the main cause of failure of ARV therapy and immunological response so that the progression of HIV disease, which is characterized by increased viral load and decreased CD4 cells. (Yogani, 2015). The success of treatment in HIV patients is assessed by three things, namely clinical success, immunological success, and virological success. Clinical success is the clinical change in HIV patients such as increased body weight or improvement in opportunistic infections after administration of ARVs. Immunological success is the change in the number of CD4 lymphocytes leading to improvement, which is higher than the start of treatment after administration of ARV (Karyadi T, 2017). Efforts to improve compliance by education and moral support during therapy and mentoring by counselors and peer groups further guarantee the openness and confidentiality of sufferers (Septiansyah Egy, et al, 2018)

Counseling is very necessary to provide knowledge of PLWHA and patient acceptance of the disease (Yori, 2017). The successful management and care of people with HIV / AIDS depends on the collaboration of health workers with their family patients. In undergoing a therapy program (Dewanti, 2015) factors that improve the quality of PLWHA are

access to antiretroviral drugs and compliance in undergoing, giving health education interventions ARV therapy increases the compliance of PLWHA to undergo therapy (Suswani, 2018). This study aims to determine the effect of counseling on adherence and response to ARV therapy in RSUD H. Sulthan Daeng Radja Bulukumba.

METHODOLOGY

Research Design

This study was a quasi-experimental qualitative study using the nonrandomized control group pretest posttest design. This research was conducted at RSUD H. Sulthan Daeng Radja Kab. Bulukumba which is one of the hospitals in the district. Bulukumba who already has a VCT Clinic.

Population and Sampling

The study population was all PLWHA who were recorded in the case report in the VCT clinic at RSUD. H. Sulthan Daeng Radja District. Bulukumba. The study sample was withdrawn by purposive sampling as many as 48 people with HIV, consisting of 24 counseling intervention groups and 24 as a control group.

Data Collection

Data is obtained through secondary data and primary data. Secondary data was obtained through the VCT Medical Record Clinic while the primary data was obtained through direct interviews with selected samples.

Data Analysis

Data were analyzed descriptively for respondents' characteristics and analyzed bivariate to see the effect of research variables on adherence using the McNemar test while the Wilcoxon test therapy response for the comparison of two paired samples, while for the compilation of two samples free of compliance with chi-square test for therapeutic response with Mann-Whitney test.

RESULTS

The number of respondents in this study were 48 people 24 people as the intervention group and 24 people as the control group. Based on the characteristics of the respondents, most of the respondents were 25-40 years old (89.5%) with the highest sex in men (81.25%), the highest marital status was married (45.8%), the highest education level was high school (68, 75%), entrepreneurial employment status (45.8%) and treatment duration of 1-5 years (95.8%).

Table 1. Distribution of group compliance counseling interventions based on the characteristics of the respondent RSUD.H.A.Sulthan Daeng Radja in 2019

Characteristics	Level of Compliance with Intervention Groups			
	Obey		Not Obey	
	Pre	Post	Pre	Post
Age				
< 25 YO (years old)		2(8,3)	2(8,3)	
25-41 YO	11(45,8)	20(83,3)	10(41,7)	1(4,2)
>41 YO		1(4,2)		
Sex				
Male	8(33,3)	18(75)	11(45,8)	1(4,2)
Female	3(12,5)	5(20,8)	2(8,3)	
Marital Status				
Married	3(12,5)	7(29,2)	5(20,8)	1(4,2)
Not Merried	5(20,8)	11(45,8)	6(25)	
Widow/Widower	3(12,5)	5(20,8)	2(8,3)	
Educational Level				
Elementary School	1(4,2)		1(4,2)	
High School	7(29,2)	10(41,7)	17(70,8)	
DIII (Diploma)		3(12,5)		
S1 (undergraduate)	2(8,3)		4(16,7)	1(4,2)
Occupation	1(4,2)		1(4,2)	
Entrepreneur		11(45,8)		
House Wife	5(20,8)	4(16,7)	6(25)	3(12,5)
Staff	1(4,2)	3(12,5)	2(8,3)	1(4,2)
Civil Servant	3(12,5)	2(8,3)		
Student	2(8,3)	2(8,3)		
Labor		1(4,2)	21(87,5)	
Duration of treatment				
1 - 5 Year(s)	11(45,8)	21(87,5)	2(8,3)	
6 - 10 Years		2(8,3)		1(4,2)

Table 2. Distribution of compliance of the control group based on the characteristics of the respondents of RSUD.H.A.Sulthan Daeng Radja in 2019

Charcteristics	Level of Compliance with Intervention Groups			
	Obey		Not Obey	
	Pre	Post	Pre	Post
Age				
< 25 YO		1(4,2)	4(16,7)	3(12,5)
25-40 YO	10(41,7)	12(50)	10(41,7)	8(33,3)
>41 YO				
SEX				
Male	6(25)	9(37,5)	14(58,3)	11(45,8)
Female	4(16,7)	4(16,7)		
Marital Status				
Not Merried	5(20,8)	7(29,2)	6(25)	4(16,6)
MeMerriednikah	5(20,8)	6(25)	6(25)	5(20,8)
Widow/widower			2(8,3)	2(8,3)
Educational Level				
Elementary School	1(4,2)	1(4,2)		
High School	7(29,2)	8(33,3)	9(37,5)	8(33,3)
DIII	2(8,3)	3(12,5)	4(16,7)	3(12,5)
Undergraduate		1(4,2)	1(4,2)	
Occupation				
Entrepreneur	3(12,5)	3(12,5)	8(33,3)	8(33,3)
House Wife	4(16,7)	4(16,7)	1(4,2)	1(4,2)
Staff	2(8,3)	4(16,7)	2(8,3)	
Student		1(4,2)	3(12,5)	2(8,3)
Labor	1(4,2)	1(4,2)		
Duration of Treatment				
1 - 5 Year (s)	10(41,7)	13(54,2)		11(45,8)
6 - 10 Years				

The results of univariate analysis of the characteristics of respondents in the counseling intervention group can be seen in Table 1 aged 25-40 years experiencing an increase in obedient percentage

(83.3%), male gender (75%) marital status (45.8%) with high school education level (41.7%), entrepreneurial employment status (45.8%) and treatment duration of 1-5 years (87.5%) while in the control group can be seen in Table 2. age 25-40 years

has increased compliance percentage (50%), male sex (37.5%) unmarried marital status (29.2%) with high school education level (33.3%), employee employment status (16.7%) and old 1-5 year treatment (54.2%).

Table 3. Pengaruh Konseling Terhadap Kepatuhan ARV di RSUD H.A.Sulthan Daeng Radja Kab tahun 2019

Variable	Intervention	Control		p-value McNemar	p-value chisquare	
	Pre test	Post test	Pre test			Post Test
	n(%)	n(%)	n(%)			n(%)
Compliance						
• Obey	11(45,8)	23(95,8)	10(41,6)	13(54,2)	0,000	0,001
• Not Obey	13(54,2)	1(4,2)	14(58,3)	11(45,8)		

Table 4. Effect of ARV Therapy Compliance Against Therapeutic response in RSUD H. Sulthan Daeng Radja District. in 2019

		n	Mean Rank	Sum of Ranks	CD4_post CD4_pre
CD4_post CD4_pre	NegativeRanks	0 ^a	00	00	Z Asymp. Sig. (2-tailed) .000 ^b
	Positive Ranks	0 ^b	00	00	.000
	Ties	48 ^c			Z Asymp. Sig. (2-tailed) -3.475
	Total	48			.001
	Treatment	24	31.44	754.50	
Control	24	17.56	421.50		

- a. CD4_post < CD4_pre
- b. CD4_post > CD4_pre
- c. CD4_post = CD4_pre

The results of bivariate analysis can be seen in Table 3. Respondents who had a level of adherence after the counseling intervention (93.8%) while in the control group (54.2%) The results of the analysis showed Mc-Nemmar test that there was an influence of counseling interventions on adherence to ARV therapy (p-value 0,000) while comparing adherence between intervention groups (95.8%) and controls (54.2%) and chi-square union results showed (p-value 0.001) which means there was an influence of counseling on adherence to ARV therapy. Whereas for bivariate analysis for therapeutic response shows in the Wilcoxon test (p-value 0,000) which means there is an influence of adherence to ARV therapy respondents and Mann-Whitney test (p-value 0.001) also means there is an influence of adherence to respondents on ARV therapy.

DISCUSSION

This study shows that there is an influence of counseling on the compliance of respondents in undergoing therapy. Based on the results of the research, respondents' characteristics in terms of age groups of productive age 25-40 years are related to the course of HIV disease for 3-10 years (Department, 2016) one of the demographic variables that affects the level of compliance (Martoni Wildra, dkk, 2013) that in productive age the motivation to recover / improve is higher compared to the age below or vice versa (Yasin, 2011). This is in accordance with the research conducted by (WHO, 2016) HIV / AIDS sufferers in the world where the most HIV-infected age group is in the

productive age group Research, Based on survey data of the Director General of PP & PL of the Ministry of Health, where the highest age group with HIV / AIDS is productive age (15-49 years). because in productive age it is possible to engage in more unprotected sexual behavior which is at risk for HIV / AIDS transmission (Andriani Aida, 2018)

Male sex is higher This is consistent with United Nations Program data on HIV and (WHO, 2016) where the highest number of sufferers is men. Ministry of Health Republic of Indonesia survey data shows that HIV patients in Indonesia are dominated by men. This is in line with research (Hutapea Hotma, 2017) that the frequency of men to be infected is higher due to risk behaviors that are more frequent than women, such as unprotected sexual intercourse using prostitution services and sharing needles and syringes for injecting drug addicts (Conradie, 2015)

Married marital status is higher seeing the age group in productive age and male sex having a married status, while the highest level of education in high school education level is a person's standard of knowledge knowledge about HIV / AIDS has entered the world of high school education so that high school education has knowledge about HIV / AIDS, this is in line with research (Martoni Wildra, dkk, 2013) That there is a significant relationship between knowledge and compliance. Research (Mahardining, 2010) where there is a significant relationship between the

knowledge variable and the compliance variable with the results of the statistical test is $p = 0.026$, the p value is below the value of $\alpha = 0.05$, which means having a relationship Before the start of ARV therapy (Payuk Irma,dkk, 2012). Job status shows the highest at 45.8% that the employment status determines the level of income with high income makes it possible to conduct behavior at risk of transmission (Sugiharti,dkk, 2014) and based on the choice of item types of work that are not included in the choice of entering into an entrepreneur. The highest treatment duration > 1-5 years to see the response of therapy can be measured by CD4 examination after treatment at least 24 months.

Based on bivariate analysis there is an effect of counseling on the compliance of PLWHA undergoing ARV therapy Counseling is one way that can be used to improve patient knowledge regarding diseases and drugs taken (Robert, 2017). The existence of counseling makes it easy to identify problems and resolve drug-related problems so that patients can adhere to their therapeutic treatments safely and correctly, Knowledge will be formed if someone has heard of something that will attract the person to know more about something. This is in line with Sundari (2013) which states that counseling plays a role in increasing knowledge about HIV / AIDS (Sinta, 2017) The effectiveness of providing Audio Visual-based education and Tutorials for PLWHA in Hasan Sadikin Hospital can improve adherence to running ARV therapy.

While the therapeutic response based on bivariate analysis shows the influence of adherence to the response of ARV therapy because one that determines the success of a therapy program is the patient's compliance in undergoing therapy given that ARV therapy is a lifelong therapy so it is expected that the level of compliance is required (Hutapea Hotma, 2017). The effects of therapy can improve the quality of life for PLWHA (Payuk Irma,dkk, 2012). The main improvement in quality of CD4 values is increasing (MOH 2006). Increased CD4 counts indicate an immunological and clinical response to disorders that enter the body (Masriadi, 2017). With the increasing quality of life for PLWHA, HIV and morbidity and mortality rates can be suppressed (Health Department, 2006).

CONCLUSION

Based on the results of the research and discussion, it can be concluded that the compliance of people with HIV experienced an increase in percentage in both the intervention group and the control group after counseling intervention in the intervention group was 109% while the control group was 30%, after statistical tests, the effect of koseling on compliance of people with HIV with a p value $< \alpha$. By adhering to ARV therapy there is an increase in the quality of life that can be felt by PLWHA while undergoing ARV therapy which is proven to be getting better, and there is

an increase in CD4 so that it can prevent the occurrence of opportunistic infections. Based on these results it was suggested to all VCTs, in addition to ARV services so that counseling activities in the form of support, motivation and assistance to PLWHA could be improved as an act of monitoring the compliance of PLWHA in undergoing therapy to obtain program success with a therapeutic response that improved the quality of life for people living with HIV.

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