

Effect on Compliance Brief Counseling Drug Supply in Hypertension Patients in Outpatient Disease in Polyclinic Hospital H. Moch. Ansari Saleh Banjarmasin Month in April-June 2015

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ABSTRACT

Introduction: In the United States, according to the National Health and Nutrition Examination Survey (NHNES III) at least 30% of hypertensive patients are unaware of their condition, and only 31% of patients treated to achieve the target blood pressure below 140/90 mmHg desired.

Objective: Knowing the influence of brief counseling is done by pharmacists to medication adherence in hypertensive patients Outpatient Clinic Internal Medicine at Hospital H. Moch. Ansari Saleh Banjarmasin April-June 2015.

Methodology: The study was a quasi-experimental study using two group research design with pretest and posttest data retrieval prospective patients on an outpatient basis in the Clinic of Internal Medicine Hospital H. Moch. Ansari Saleh Banjarmasin in April to June 2015. Patients were randomly divided into two different groups, namely the group that received intervention in the form of brief counseling from the pharmacist / researcher and the control group were followed for approximately two months to observe the level of compliance and therapeutic outcomes (drop in blood pressure). Exclusion criteria were pregnancy, deaf and absent on the second visit. Data collected by conducting interviews and questionnaires MMAS.

Results and discussion: The results of this study showed that the treatment group there was an increase in the percentage of compliance levels sedang: from 67.7% to 91.25 on the second visit (post 1) and 97.1% on the second visit (post 2). Whereas in the control group also increased, although not as big as the treatment group. This shows that the counseling given pharmacists can assist in improving patient adherence to the treatment group. Counseling interventions that can help patients with hypertension in therapy. Statistical test results obtained by an increase in the value of compliance in the treatment group amounted to $0.87 \pm 0.21 \pm 0.67$ 1,03dan whereas in the control group, 0.24 ± 0.78 and 0.74 ± 2.03 . These results indicate that there are significant differences between MMAS scores in the treatment group and MMAS scores in the control group ($p < 0.05$).

Conclusion: Counseling given pharmacists can have a positive impact in improving patient adherence to the group perlakuan.intervensi so that it can help patients achieve therapeutic success.

Keywords: Hypertension, Drug Drinking Compliance, MMAS

INTRODUCTION

Hypertension is a major risk factor for heart problems. In addition to causing heart failure, hypertension can lead to kidney failure and cerebrovascular disease (MOH, 2007). In the United States, according to the National Health and Nutrition Examination Survey (NHNES III) at least 30% of hypertensive patients are unaware of their condition, and apply only 31% of patients treated achieve the desired blood pressure targets below 140/90 mmHg (Hajjar et al., 2003) Noncompliance (not compliance) and disagreement (nonconcordance) patients in therapy is a common problem that patients experiencing treatment failure (MOH, 2006). Noncompliance can be caused by various factors, which can be caused by a lack of knowledge and understanding of drugs and about drug use for

treatment (MOH, 2006). It also can be caused by the complexity of the drug regimen, behavior, drug charges, age (increasing age versus best with medication adherence), low social support, cognitive problems (WHO, 2003). Perceptions of illness and duration of the disease, psychological factors, drug safety, and tolerability (Pe'rez et al., 2013).

The problem of non-compliance in the treatment not only affects the outcome of therapy, but also affects the quality of life of patients. With the low patient compliance in taking medication, the patient's quality of life will also decrease (Saleh et al., 2014). The essential role of pharmacists to increase patient awareness to change the behavior of patients, by providing education about the disease that is being experienced by the patients and families, improving the patient's motivation to undergo treatment (Sander et al., 2011).

Research conducted Hughes et al (2011), showed changes in blood pressure and target achievement rate of compliance despite the assessment of the quality of life of patients with hypertension have not been significant.

Based on the results of research conducted by Palanisamy and Sumathi in 2009 explained also that interventions to provide education and counseling to patients can improve adherence to treatment. Pharmacist intervention improve blood pressure control in hypertensive patients who have uncontrolled blood pressure.

Methods of counseling has been done, including in programs to stop smoking, alcoholism, addiction to marijuana (Steinberg., Et al 2005) and others. One of the benefits of counseling is to increase patient compliance in the use of the drug, so the numbers of deaths and losses (both costs and loss of productivity) can be pressed (Palaian et al, 2006).

The purpose of this study was to know the effect brief counseling performed by pharmacists to medication adherence in hypertensive patients in outpatient Polyclinic Hospital Medicine H. Moch. Ansari Saleh Banjarmasin April-June 2015.

METHODS

The level of compliance is the ranking that shows patient compliance in the treatment of which are divided into three categories and is obtained from the value of the total score after answering a questionnaire Morisky Medication Adherence Scale (MMAS). MMAS is a questionnaire used to assess patient compliance.

Research is a quasi-experimental study using two group study design pretest and posttest with a prospective patient data retrieval. Patients were randomly divided into two different groups, namely the group that received intervention in the form of brief counseling from the pharmacist / researcher and without the intervention group (control) were followed for approximately two months to observe the level of compliance and therapy outcome (decreased blood pressure).

This research was conducted in a hospital clinic disease H. Moch. Ansari Saleh Banjarmasin period from April to June 2015. During the month of patients who collected amounted to 34 people consisting of adult patients both males and females aged 18-65 years, patients with a diagnosis of hypertension who received antihypertensive drugs, not illiterate and willing to follow research. patient patients who do not take if pregnant, deaf and absent on the second visit.

Before the study began researchers asked test research ethics that have been tested and qualified ethics of the Ethics Committee at the University of Ahmad Dahlan in Yogyakarta. The type of data in this study are primary and secondary data. The primary data obtained through interviews using a structured questionnaire. While secondary data such as patient characteristics, the blood pressure is taken from a medical record.

Patients who met the inclusion criteria were asked to fill out informed consent. Information collected included sociodemographic and clinical features of the data. Age of patients who are grouped into two: <45 years and > 45 years. The level of education fall into two groups: 0-9 years of education and > 9 years. Occupation patients also classified into two, low and high according to the patient's income. Low job here including IRT, bedagang, workers and peasants. While high job here PNS, private and self-employed. A history of hypertension and smoking habits of patients also recorded to determine the habits of the patient.

Clinical features of patients grouped according to the level of hypertension patients are hypertensive I with systolic blood pressure of 140-159 or diastolic 90-99 mmHg, while for stage II with systolic blood pressure ≥ 160 or DBP ≥ 100 mmHg. Older hypertension and antihypertensive medication. After charging data sosisodemografi and clinical features of patients were interviewed and filling the questionnaire New 8 Item Self Report Morisky Medication Adherence Scale (MMAS) which has been translated. Questions raised as much as 8 items with categories adherence levels: high adherence grades 8, compliance was less than 8 grades 6 and low adherence value <6. During the interview the patients maintained forget to keep them interested in doing filling the questionnaire MMAS, after the interview is over, patients are given rewards.

RESULTS AND DISCUSSION

Demographic characteristics of all patients in Table. 1. Patients were divided into 2 groups: control group and intervention group. Each group numbered 34 people. in the control group and the treatment group sex male 18 people (53.0%) and 16 women (47.0%). While the number of patients by age group in the control group with age <45 years amounted to 3 and > 45 years amounted to 31 people. The group treated with age <45 years 3 people (8.9%) and age > 45 years 31 (91.1%). Education of patients in the control group and the treatment group for low education up to junior respectively 18 and 20 people, followed by college graduates (SLTA, DI, DII, DIII, S1, S2) as many as 16 people and 6 people. In both treatment groups control or patient education largely up to junior. Based on the work of patients, patients with a control group and the group treated with high employment (civil servants, private and self-employed) as many as 23 people (67.65) and the treatment group of 20 people (64.7%), while for lower employment (no work, labor, merchants, and IRT) 11 (32.35%) and 14 (58.9%). A history of hypertension at montrol and treatment groups respectively as many as 31 patients (91.17%) and 16 (47.06%) who have a family history of hypertension and 3 (8.82%) and 18 orangg (52, 94%) who do not have a family history of hypertension. As for smoking status and treatment montrol group there were 6 people (17.65%) and 2 (5.8%) patients smoked and 28 people (82.35%) and 32 patients (94.2%) do not smoke and have a history of smoking. Results from test analysis carried out on the data characteristics of hypertensive patients can be seen that between the control and treatment groups did not differ significantly ($p < 0.05$) on gender (1.000), age (0.951), education (0.461) and the status smoked (0.053). but on the job (0,024) and a history of hypertension (0,000) patients with hypertension between control and treatment groups obtained a significant difference ($p > 0.05$).

Table I. Characteristics of Patients Hypertension Research Subjects

Patient Characteristics	Control group		Intervention group		P
	Total (n=30)	%	Total(n=30)	%	
Sex					
Males	10	29,41	18	53,0	1,000
Females	24	70,59	16	47,0	
Age (year)					
< 45 tahun	4	11,76	3	8,9	0,951
>45 tahun	30	88,23	31	91,1	
Education					
Low education	18	52,94	20	66,7	0,461
High education	16	47,06	6	20,0	
Work					
Hight job	23	67,65	20	64,7	0,024
Lowjob	11	32,35	14	58,9	
Riwayat Hipertensi					
Ada	31	91,17	16	47,06	0,000
Tidak ada	3	8,82	18	52,94	
Smoking status					
Yes	6	17,65	2	5,8	0,053
No	28	82,35	32	94,2	
IMT					
<25	24	70,59	23	67,65	0,727
>25	10	29,41	11	32,35	

Low education: without school, Primary School, Junior High School.

High education: Senior High School, D1, DII, DIII, S1, S2

High job: PNS, Private, Self Employed

Low job: IRT, Labor, Farmers, Merchants

p is the significant value of the treatment group compared to the control group using Independent Samples T Test test for continuous variables and chi-square test for categorical variables

Clinical features of patients with hypertension can be seen in Table 2. In the clinical picture of hypertension patients and grade are antihypertensi drugs consumed by the patient. Group control for hypertension Grade I No 21 patients (61.77%) and grade II there were 13 patients (38.23%). The treatment group to grade I, there were 14 patients (41.17%) and grade II there were 20 (58.82%).

Tabel 2. Demographics Clinical Hypertension Patients in Hospital Dr. H. Moch. Ansari Saleh Banjarmasin

Demographics Clinical	Kelompok Perlakuan		Kelompok Kontrol	
	Jumlah (n=34)	%	Jumlah (n=34)	%
Hypertension level				
Level 1	14	41,17	21	61,77
Level 2	20	58,82	13	38,23
Sick period				
<16 month	20	58,82	22	64,70
>16 month	14	41,17	12	35,30
Antihypertensive drugs				
Diuretik	4	11,76	4	11,76
ACEI	5	14,7	1	2,94
ARB	10	29,41	20	58,82
CCB	25	73,53	21	61,77

Description:

p is the significant value of the treatment group compared to the control group using Independent Samples T Test test for continuous variables and chi-square test for categorical variables

Results are shown in **Table III**, based on the increase in scores (Δ) MMAS between control and treatment groups obtained a significant difference ($p < 0.05$), increased scores (Δ) MMAS in the treatment group from 0.87 ± 1.03 to 0.21 ± 0.67 greater than the increase in scores (Δ) MMAS in the control group of 0.24 ± 0.78 becomes 0.74 ± 2.03 . The above results indicate that the provision of brief counseling "5A" may improve patient compliance in taking medication significantly.

Table III. The average value of the control group improved adherence and treatment group (mean \pm SD)

The average increase of	Control group		Intervention group		p_1	p_2
	Δ_1	Δ_2	Δ_1	Δ_2		
Compliance	0,24 \pm 0,78	0,74 \pm 2,03	0,87 \pm 1,03	0,21 \pm 0,67	0,033*	0,054

Δ_1 = average increment in compliance with the pre visit to post 1

Δ_2 = average difference between the value of compliance on a visit to the post 1 post 2

p_1 = Differential test adherence to visit one of the pre-post treatment group compared to the control group using the Mann-Whitney test (for the data were not normally distributed $p < 0.05$).

p_2 = Differential test compliance with the first post-post visits 2 of the treatment group compared to the control group using the Mann-Whitney test (for the data were not normally distributed $p < 0.05$).

* = There was a significant difference ($p < 0.05$) between the group treated with the control

Factors which may affect the compliance of which can be due to an increase in the level of education, income and awareness of patients. Although the control group not given the intervention, but also experienced a significant increase in scores MMAS. It can be caused in the control group more college educated, thus indirectly if higher education the higher knowledge so that adherence to taking medication also increased compared to lower education.

Effect of brief counseling "5A" may improve patient compliance in taking medication is also positive in accordance with the results of previous studies which have been carried out by Alfie (2013) which shows that brief counseling positive effect in improving medication adherence in hypertensive patients.

The problem of non-compliance in the treatment not only affects the outcome of therapy, but also affects the quality of life of patients. With the low patient compliance in taking medication, the patient's quality of life will also decrease (Saleh et al., 2014). Some of the reasons put forward by the patient that cause non-adherent patients in taking medication, including patients admitted to forget for lunch during working hours, the patient feels has improved because blood pressure is normal, and the lack of knowledge about hypertension and ignorance of patients regarding the purpose of treatment. Many patients assume that when the blood pressure drops and normal, there is no need to take medication anymore. Or when symptoms are felt had improved patient feels no need to take medication anymore.

The cause of uncontrolled blood pressure is due to patient non-compliance in taking medication, age older patients often forget, inadequate dosage accuracy, patient noncompliance in improving lifestyles such as excessive weight gain, excess body fluid volume, excess salt, decreased kidney function walk progressive, the other therapies, still use the materials or other drugs that increase blood pressure, the presence of drugs that affect and interact with antihypertensive drugs

work, other causes or secondary (Calhoun et al, 2008).

Effective counseling includes all the parameters that make the patient understand about the disease, medication and lifestyle changes required. Counseling not only improve compliance, but also reduce complications as a result of noncompliance to treatment (Palaian et al, 2006).

CONCLUSION

From the above results indicate that the counseling given pharmacists can have a positive impact in improving patient adherence perlakuan. Intervensi groups that can help patients achieve therapeutic success.

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BIBLIOGRAPHY

- Alfie R., 2013. Effects of Counseling Against Oral Pharmaceuticals Conduct, Compliance Drinking And Drug Treatment Results in Patients Hypertension Outpatient Clinic Disease PKU Muhammadiyah Hospital in Bantul, Thesis, Faculty of Pharmacy, University of Ahmad Dahlan, Yogyakarta
- Calhoun, DA, Daniel, J., Stephen, T., David, C., Goff, TP Murphy, RD, Toto, AW, William, CC, William, W., Domenic, S., Keith, F., Thomas, DG, Bonita, F., Robert, MC, 2008. Resistant Hypertension: Diagnosis, Evaluation, and Treatment: A Scientific Statement From the American Heart Association Professional Education Committee of the Council for High Blood Pressure Research, *Hypertension*, 51: 1403-1419
- MOH, 2006, Guidance Counseling Pharmaceutical Services In Support of Health, Directorate General of Pharmaceutical and Medical Devices, Ministry of Health of the Republic of Indonesia.
- MOH, 2007, the Pharmaceutical Care For Hypertension Diseases, Directorate of Pharmacy and Community and Clinic, Department of Health of the Republic of Indonesia.
- Hughes, J., Keen, N., Dillon, M., 2001, Hypertension: Improving Patient Compliance and Clinical Outcome Trough Manage Care Community Pharmacist, Final report of pharmacy Practice Research Grant, pp 169-73.
- Hajjar I, Kotchen TA. Trends In Prevalence, Awareness, Treatment, And Control Of Hypertension In The United States, 1998 - 2000. *JAMA* 2003; 290: 199-206
- Palaian, S., Mukhyaprana, P., Ravi, S., 2006. Patient Counseling by Pharmacist Focus on Chronic Illness, *sir. J. Pharm. Sci.*, Pp: 19 (1): 62-65.
- Pe'rez-Luis-Emilio Garcia, Maria Alvarez, Tatiana Dilla, Gil-Guillén Vicente, Domingo Orozco-Beltrán., 2013. Adherence to Therapies in Patients with Type 2 Diabetes. *Ther diabetes*; 4: 175-194.
- Farzana Saleh, J Shirin Mumu, Ferdous Ara, Md Abdul Hafez and Liaqu Ali., 2014. Non- adherence to self-care practices and health medicationand related Quality of Life Among patientswith type 2 diabetes: a cross- sectional study. *BMC Public Health*, 14:431.
- Sander, D. Borgsteede, Marjan J. Westerman, and Jacqueline G. Hugtenburg., 2011. Factors related to high and low levels of drug adherence According to Patients with type 2 diabetes. *int J Clin Pharm*. October; 33 (5): 779-787.
- Steinberg, K.L. ; Roffman, R.A. ; Carroll, K.M. ; McRee, B. ; Babor, T.F. ; Miller, M. ; Kadden, R. ; Duresky, D. ; and Stephens, R., 2005. Brief Counseling for Marijuana Dependence: A Manual for Treating Adults. DHHS Publication No. (SMA) 05-4022. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.