International Journal of Medicine and Pharmaceutical Research

Journal Home Page: www.pharmaresearchlibrary.com/ijmpr

Research Article Open Access

Prospective and Randomized Study to Improve the Quality of Life of Hypertensive Patients after Counselling

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A B S T R A C T

Hypertension is a Persistant Elevation of Blood Pressure more than 140/80.Pharmacist is one of the Members in the Health Care Team Providing counselling to the Hypertensive Patients to improve the Quality of life. The Prospective study was carried out for a period of six months in a 750 Bedded Teaching Hospital. The total 60 patients are enrolled in a study. They are divided into counselling group and control group. The knowledge attitude practices questionaries are prepared and distributed to counselling group. The Quality of life Questionaries are Prepared and Distributed to counselling group. Before and after (follow up 1 and follow up2) counselling group scores are evaluated. There should be increase in knowledge attitude practices and Quality of life in counselling group is compared with control group after counselling. the statistical analysis was Performed using Graph Pad Prism software. After six months counselling Statistically Significant improvement with values P<0.001,P<0.05 Respetively.

Keywords: counselling, Quality of life, Health Care, Blood Pressure

A R T I C L E I N F O

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Article History: Received 31 March 2015, **Accepted** 18 May 2015, **Available Online** 10 June 2015

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Manuscript ID: IJMPR2607

PAPER-QR CODE

Citation: A. Bharath kumar, et al. Prospective and Randomized Study to Improve the Quality of Life of Hypertensive Patients after Counselling. *Int. J. Med. Pharm, Res*., 2015, 3(3): 1063-1068.

1. Introduction

Hypertension is a Common Non Infectious Disease and Preventable Cardiovascular Risk Factor, Affecting About 1.7 Million Deaths/year worldwide. Hypertension is a Risk Factor for stroke and coronary heart disease, and is contributor to the onset and Progression of chronic heart failure and chronic kidney failure. Hypertension, or High Blood pressure, is the Essential Risk Factor for the Development of cardiovascular disease (CVD) includes both (I H D) and Cerebrovacular events [20]. The clinical trials were Explained the benefits of Blood Pressure control with drugs to Reduce cardiovascular System Morbidity And Mortality. There are two types: Primary or Essential Hypertension (97-98%) has no clear cause But Appears To Be the result of An genetic and environmental factors. Secondary Hypertension (2-3%) is caused by a specific cause involving kidneys or endocrine system [1]. The renin angiotensin aldosterone plays a major role in pahophysiology of hypertension (RAAS).

Etiology

In most patients, the cause for high blood pressure is not clear. However, we know that you are at risk of getting high blood pressure if you:

a. Smoking
b. Alcohol
c. High Fat Intake
d. Low Fiber Diet
e. Endocrine Disorders
f. Taxaemia During Pregnancy
g. Increase Serum Rennin Level
h. Hypersensitivity of Sympathetic System
i. Over Weight
j. Eat Too Much Salt
k. Do Not Have Enough Exercise
l. Have A Family History of High Blood Pressure (Genetics)
m. Are 40 Years Or Older
n. Kidney Diseases

Epidemology

One Billion People or ~26% of the Adult Population of the World Had Hypertension. It Was Common In Both Developed (333 Million) and Undeveloped (639 Million) Countries [19].

Signs and symptoms

Papilledema, Proteinuria, Hematuria, Polyuria. Sweating, Seizure, Coma, Confusion, Palpitation, Cramps, Weakness, Vision loss, Weight Gain, Edema, Menstrual Irregularities, Headache, Tachycardia, Orthostatic Hypertension, Weight gain, Edema, Light Headedness, Muscle Weakness, Recurrent Acne [2].

Diagosis

Traditionally, the National Institute of Clinical Excellence (NEC) recommends three separate sphygmomanometer measurements at one Monthly interval. The American Heart Association recommends at least three measurements on at least two separate health care visits. The Hypertension is Managed by using Pharmacological Therapy includes Diuritics, ACE inhibitors, calcium channel blockers, Alpha-blockers, AT1 Antagonist, Beta-blockers, Central sympatholytics, Vasodilators, Reserpine [3].

Non Pharmacological Therapy Includes

Meditation
Dietary Supplements
Smoking Cessation
Increased Potassium Intake
Weight Loss
Increased Physical Activity
Dietary Changes
Limiting Alcohol Consumption
Exercise
Sodium Reduction

2. Materials and Methods

- A prospective and randomized study was conducted for aperiod of 6 months from september 2014 to February 2015 in (DSR Govt. District Head Quarters Hospital. Nellore) of 750 bedded Teaching Hospital.
- The Patients Diagnosed to having Hypertension more 140mmHg (SBP) and more than 90 mm Hg (DBP[18]).And who have using Anti Hypertensive medications and willing to Participate were included in the stiudy. Patients with cognitive, Psychiatric, Hearing Problems below the 12 years childrens were Excluded from the Study.
- The Ehical Committee of the institution approved the study. The Interested Patients were Screened For the Study. The blood Pressure Measured were Performed Right Upper limb sitting Position help of the Doctor. The 60 patients are enrolled in the study[6], Attending both in patients and out Patients in the Hospital.
- They were divided into 2 groups. Counselling group and Control Group. The counselling Group counseling is Provided and for the Control Group there was no counselling is provided [9].
- The counselling group Patients Received Counseling Regarding Life style Modifications, Diet, Quality of life monitoring. The Patient Information Leaflets Prepared and Distributed to Counselling group [4].
- All the information obtained was collected in Patient data collection form. The Questionaries is compared of 10 questions regading knowledge Attitude Practices, General Health perceptions (i.e. Quality of life). After the data collection the Pharmacist given counselling to the counseling group. At initially the Patients Received Face to Face counselling from 30-45 minutes and Educated the Patients Regarding Hypertension Treatment and Life style Modifications [5].
- The subjects were Follow up and Counselling were conducted by Pharmacist through Telephone calls and Reports were noted.the Frequent Telephone calls Reminder from the Pharmacist Helps to the Patients Promote Better usuage of Medications [17].

- After the 6 months the knowledge attitude Practices questions and quality of life of patients were Re Assed using the graph Pad Prism soft ware. A Paired T test was used for the comparision of Quality of life Before and After the counseling [7]. (Follow up visit 1 compare with follow up visit- 2).A significant level of $P<0.05$.

3. Results and Discussion

- Hypertensive Patients neede Patient care to control Blood Pressure. This study reveals the Pharmacist counselling improve the Quality of life in Discharged Patients with Hypertension.
- The total 60 patients were Participated in the study[8].Before the counselling the knowledge, Attitude Practices score is (Follow up visit-1)144 (48%).
- After the counselling the knowledge Attitude Practices score is (Follow up visit-2)248 (82.66 %).The knowledge, attitude Practices for control group score is 95.
- Before the counselling the Quality of life score is(Follow up visit-1) 157(52.33%) After the Quality of Life score is (Follow up visit-2)249 (83%).
- The Quality of life for control group score is 122.The Patient knowledge, attitude Practices Before counselling (follow up visit-1) Mean ± SD is 4.80±0.714.
- After the counselling (Follow up visit -2) Mean ± SD is 8.26 ± 0.63.
- The patient knowledge, attitude practices for control group Mean ± SD 3.167± 0.87.
- The Patient Quality of Life Before the counselling (Follow up visit-1) Mean ± SD is 5.23±0.97.
- The Patient Quality of Life after the Counselling (Follow up visit-2) Mean ± SD is 8.167± 0.53.
- The Patient Quality of Life for the Control Croup Mean ± SD is 4.067± 0.98.

Age wise distribution in Counselling and Control Group

In Counseling Group, 10 (33.33%) patients were in the age group of 21-30 years, 6 (20%) patients were in the age group of 31-40 years, 4 (13.33 %) patients were in the age group of 41-50 years and 10(33.33%) patients were in the age group of 51-60 years. In control Group 8(26.66%) patients were in the age group of 21-30 years, 2(6.66%) patients were in the age group of 31-40 years, 8(26.66%) were in the age group of 41-50 years and 12 (40%) patients were in the age group of 51-60 years[10].

Table 1

Age (in years)	**Counseling Group**		**Control Group**	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
21-30	10	33.33	8	26.66
31-40	6	20	2	6.66
41-50	4	13.33	8	26.66
51-60	10	33.33	12	40
Total	30	100	30	100

Gender wise distribution in Counselling and Control Group:

A total of 60 patients were selected for the study, in which 30 patients made counselling and remaining 30 were control group. In counselling group males 21(70)9 females (30), in control group males 20 (66.66) females 10 (33.33).

Table 2

Gender	**Counselling Group**		**Control Group**	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
Male	21	70	20	66.66
Female	9	30	10	33.33
Total	30	100	30	100

Smoking Status in Counselling and Control Group

Table 3

Smoking	Counselling Group		Control Group	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
Smoker	20	66.66	15	50
Non-Smoker	10	33.33	15	50
Total	30	100	30	100

Smoking history of patients in both Counselling and control groups. In counselling group, 20 (66.66%) patients were smokers and 10 (33.33%) patients were non-smokers[11]. In Control group, 15 (50%) patients were smokers and 15 (50%) patients were non-smokers.

Alcoholic Status in Counselling and Control Group

In counselling group, 21 (70 %) patients were Alcoholic and 9 (30%) patients were non Alcoholic. In Control group, 15 (50%) patients were Alcoholic and 15 (50%) patients were non-Alcoholic [12].

Table 4

Alcoholic	Counselling Group		Control Group	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
Alcoholic	21	70	15	50
Non-Alcoholic	9	30	15	50
Total	30	100	30	100

Literacy wise distribution

In counselling group, 14 (46.66 %) patients were Literates and 16 (53.33%) patients were Illeterates. In Control group, 15 (50%) patients were Literates and 15 (50%) patients were Illeterates [13].

Table 5

Literacy	Counselling Group		Control Group	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
Literate	14	46.66	15	50
Illiterate	16	53.33	15	50
Total	30	100	30	100

Patient vs Past medical History

Table 6

S.No	Counselling Group		Control Group	
	Number of patients (n=30)	Percentage (%)	Number of patients (n=30)	Percentage (%)
Hypertension	30	100	13	43
Diabetes mellitus	15	50	27	90
Total	30	100	30	100

In counselling group, 30 (100 %) patients were having Hypertension and 15 (50%) patients were Having Diabetes mellitus[14]. In Control group, 13(43%) patients were having hypertension and 27 (90%) patients were Having diabetes Mellitus.

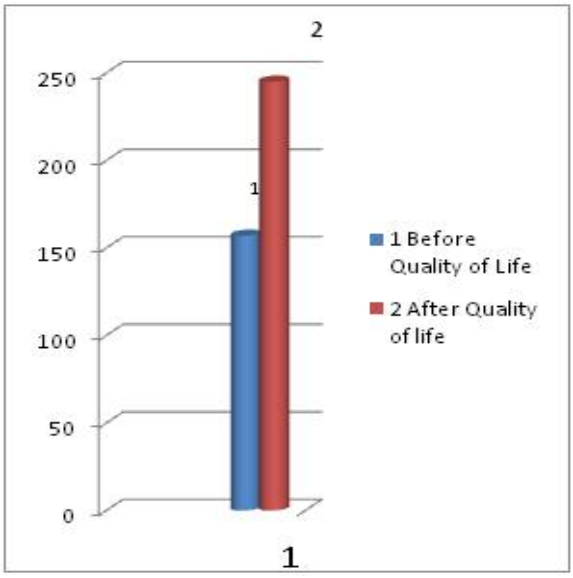

Figure 1: Comparison of before and After the Patient Quality of life

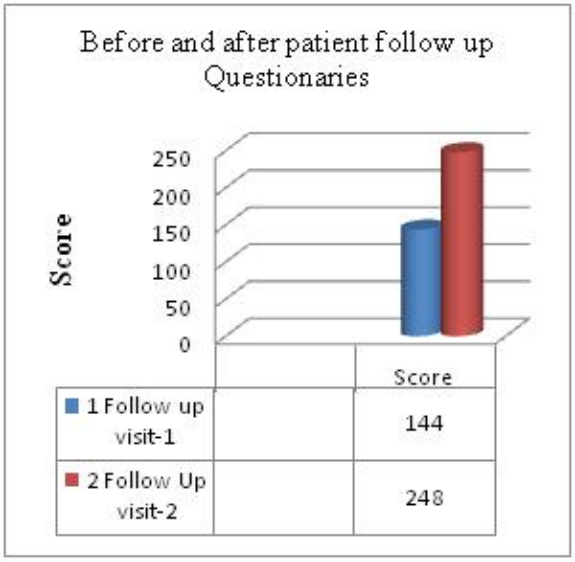

Figure 2: Comparision of before and after the Patient Questionaries follw up Visit

4. Conclusion

1. Knowledge, Attitude and Practices (Patient Questionaries) were found to be improved in counseling group when compared with control group [(15)].
2. It was found that there has been an enhancement in the Quality of life of Hypertensive patients after counseling when compared with control group.
3. All the above findings strongly suggest that Pharmacist education interventions are an effective way to improve Quality of life of hypertensive Patients After counseling.

5. Acknowledgement

We express our gratitude thanks to Dr.B. Kumar Professor and HOD Department of Pharmacy Practice. Ratnam Institute of Pharmacy. Nellore, Dr.M. Gobinath Principal Ratnam institute of Pharmacy. Nellore. and thanks to Dr.N. Vijaya Bhaskar Reddy. Civil surgeon Specialist in D.S.R. Government District Head Quarters Hospital. Nellore. and special thanks to Dr. Ravindranath Tagore Ex. Medical Superintendent D.S.R. Government District Head Quarters Hospital .Nellore And thanks to Dr. Usha Sunderi (R.M.O) in D.S.R. Government District Head Quarters Hospital .Nellore And Thanks to Nursing Department, Pharmacy Department staff of D.S.R. Government District Head Quarters Hospital. Nellore who helped us to complete this work.

6. References

1. National Heart Foundation of Australia. Guide tomanagement of hypertension 2008. Assessing and managing raised blood pressure in adults. NHF;2008 http://www.heartfoundation.org.au/Professional_Information/Clinical_Practice/ Hypertension.htm [cited 2008 Nov 10]
2. Mancia G, De Backer G, Dominiczak A, Cifkova R, Fagard R,Germano G, et al. 2007 Guidelines for the Management of Arterial Hypertension. The Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). J Hypertens 2007;25:1105-87.
3. Critchley J, Capewell S. Smoking cessation for the secondary prevention of coronary heart disease. Cochrane Database Syst Rev 2004:CD003041.
4. National Heart Foundation of Australia. Summary of evidence statement on the relationships between dietary electrolytes and cardiovascular disease. October 2006.
5. http://www.heartfoundation.org.au/document/NHF/NHFA_DietaryElectrolytes_CVD_SummaryofEvidenceSt_2006_FINAL.pdf [cited 2008 Nov 10]
6. Cavalcante MA, Bombig MTN, Filho BL, Carvalho ACC, Paola AAV, Povao R et al. Quality of Life of Hypertensive Patients Treated at an Outpatient Clinic. Arq Bras Cardiol. 2007; 89(4):245-50.
7. Wilson IR, Cleary PD. Linking Clinical Variables with Health related Quality of life: a conceptual model of patient's outcomes. JAMA 1995; 273:59-65.
8. Armstrong, N. Rochnia, C. Harries, S. Bundock, and J. Yorke, "The trajectory to diagnosis with pulmonary arterial hypertension: a qualitative study," *BMJ Open*, vol. 2, no. 2, Article ID e000806, 2012.
9. C. Harries and I. Armstrong, "A review of the management of pulmonary arterial hypertension associated with congenital heart disease.," *European Journal of Cardiovascular Nursing*, vol. 11, no. 2, pp. 239–247, 2012.

10. 12. Testa MA, Simonson DC. Assessment of quality of life outcomes. NEJM. 1996;vol;334(13):835-839 13. Tankova T, Dakovska G, Koev D. Education and quality of life in diabetic patients. Patient education and Counselling.
11. . Schroeder K, Fahey T, Ebrahim S. Interventions for improving adherence to treatment in patients with high blood pressure in ambulatory settings.Cochrane Database Syst Rev. 2004;(2):CD004804.
12. Morisky D, et al. Concurrent and predictive validity of a self-reported measure of medication adherence. Medical Care 1986;24:67–74.
13. Carter BL, Ardery G, Dawson JD, et al. Physician and pharmacist collaboration to improve blood pressure control. Arch Intern Med.2009; 169(21):1996-2002.
14. Roumie CL, Elasy TA, Greevy R, et al. Improving Blood Pressure Control through Provider Education,Provider Alerts, and Patient Education. Ann Intern Med. 2006; 145:165-175.
15. Bosworth HB, Olsen MK, Grubber JM, et al. Two Self-management Interventions to Improve Hypertension Control. Ann Intern Med. 2009; 151:687-695.
16. Ostchega Y, Yoon SS, Hughes J, Louis T. Hypertension awareness, treatment, and control continued disparities in adults: United States, *2005–2006*. Hyattsville, MD: National Center for Health Statistics; 2008.NCHS Data Brief No. 3.
17. Robinson JD, Segal R, Lopez LM, Doty RE.Impact of a pharmaceutical care intervention on blood pressure control in a chain pharmacy practice. *Ann Pharmacother*. 2010;44:88-96.
18. McKenney JM, Slining JM and Henderson HR *et al* (1973).The effect of clinical pharmacy services on patients withessential hypertension. *Circulation*, **48**: 1104-11.
19. Staessen J, Fagard R, Lijnen P, Amery A: Body weight, sodium intake, and blood pressure. J Hypertens 1989;7:S 194323.
20. Chalmers J. Implementation of guidelines for management of hypertension. Clinicaland Experimental Hypertension, 1992, 21:647–657