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PATIENT COUNSELLING MEDIATED BY CLINICAL PHARMACISTS ON HYPERTENSIVE PATIENTS

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Abstract

Hypertension has become a significant problem in developing countries which is associated with aging of the population, urbanization, socio economic changes favouring sedentary habits, obesity, alcohol consumption, and salt intake etc. The management of hypertension involves long term treatment & life style modification which will have greater impact on HRQoL. This study aims to give patient counselling regarding risk factors, life style modifications, pharmacological therapy & medication adherence in hypertension which in turn improves HRQoL.

Methodology: Prospective interventional study. The study was conducted in Jayabharath Hospital, located in Nellore district which was conducted for a period of 6 months. Hypertensive patients, of either sex, above 18 years of age, with or without co-morbidities and Patient willing to give there informed consent to participate in the study are included in our study and the Pregnant hypertensive patients are excluded from the study

Results and Discussion: At baseline there was no significance difference between the blood pressures, QoL score, adherence score, and KAP of the test and control groups. As patient in both group continued to see their physician regularly, both showed in improvement in blood pressure control at final follow up. However improvement in the test group blood pressure was more significant reduction ($p<0.05$).

Keywords: Hypertension, HRQoL, Prospective interventional study.

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Introduction

Hypertension is not a disease but it is an important risk factor for cardiovascular complications. It can be defined as a condition where blood pressure is elevated to an extent where clinical benefit is obtained from blood pressure lowering. Hypertension has become a significant problem in developing countries which is associated with aging of the population, urbanization, socio economic changes favoring sedentary habits, obesity, alcohol consumption, and salt intake etc [1].

In 1990 cardiovascular disease caused 2.3 million deaths in India and this number is projected to double by year 2020. It is estimated that 20% of adult population of most countries is affected by chronic illness. Although 69% of the people with hypertension are aware of that they have disease and 54% are receiving treatment, only 27.4%

achieve adequate blood pressure control. In India hypertension is emerging as major health problem and is more prevalent in urban than in rural subjects. It is directly responsible for 57% of all stroke deaths and 24% of all coronary diseases deaths in India [1].

The most common and important cardiovascular complications associated with hypertension are stroke and myocardial infarction. In health care research and produce quality of life has become ever more important since the world health organization defined health as being not only the absence of disease and infirmity but also the presence of physical, mental & social well-being quality of life represents a broad range of human experiences related to one's overall wellbeing and may be influenced by a multitude of nonmedical factors such as financial status, individual freedom and one's own personal environments hypertension care includes knowledge in symptom recognition, diets & life style modifications like routine exercise adherence to medications which includes dosage adjustment and timing & detection & management of signs & symptoms of hypertension [2, 3].

The primary goal of the treatment of a hypertensive patient is the reduction of the long-term risk of cardiovascular morbidity and mortality. Clinicians should also assure the positive effect of the interventions used. Gathering patient-derived data about how patients experience hypertension and the effects of treatment should be an essential part of good clinical practice. Health-related quality of life (HRQoL) in clinical medicine represents definition 'the functional effect of an illness and its consequent therapy upon a patient, as perceived by the patient' A recent systematic review and meta-analysis of observational studies of HRQoL in hypertensive patients concluded that hypertension reduces HRQoL, but the magnitude is small⁴. The goal of antihypertensive therapy is to reduce morbidity and mortality by the least intrusive means possible, yet all current pharmacological treatments have been shown to have varying degrees of side effects. This negative impact of pharmacological regimens on the Health Related Quality of Life (HRQoL) might affect adherence to therapy and therefore treatment outcomes. The management of hypertension involves long term treatment & life style modification which will have greater impact on HRQoL. This study aims to give patient counseling regarding risk factors, life style modifications, pharmacological therapy & medication adherence in hypertension which in turn improves HRQoL.

Aim and objectives

To assess the Effects of Patient Counseling on quality of life of hypertensive patients in clinical pharmacy in Jayabharath Hospital Nellore.

Specific objectives

- To assess the disease related knowledge of hypertensive patients
- To assess the medication adherence of hypertensive patients
- To design suitable patient information leaflet (PIL) on hypertension and its management use the same to educate the patients.
- To assess the impact of education on outcome of treatment (blood pressure level) and quality of life of these patients.

Methodology

Study design: Prospective interventional study.

Study site: The study was conducted in Jayabharath Hospital, located in Nellore.

Study period: The study was conducted for a period of Six months

Study criteria

Inclusion criteria

The following categories of patients, who visited the study sites, have been enrolled in to the study Hypertensive patients, of either sex, above 18 years of age, with or without co- morbidities Patient willing to give their informed consent to participate in the study Exclusion criteria:

Pregnant hypertensive patients

Study procedure Patient enrolment

The nature of the study was explained to the patients and they were requested to visit the Jayabharath Hospital to enroll in to the study If they wish.

Patient satisfying the inclusion criteria, who expressed an interest in participating in the study were enrolled after the nature of the study was explained to them and their informed consent was obtained

Collection of data

Patient details were collected through the suitably designed data collection form and by patient's interview, prescriptions and / or medication strips

Measuring QoL

Quality of Life scores were assessed based on their response to the SF-36v2 Health Survey administered by patient interview. It contains 11 questions focusing on General, Functional status, Psychological, Social/family, Positive Wellbeing and Physical activity. The score ranges for the General domain is 2-10, for the Functional domain is 10-30, for the Psychological condition domain is 12-60, for the social/family is 2-10, for the Positive Wellbeing is 4-20, for Physical 4-20. The higher score indicate higher Quality of life. To determine the effect of education on patients Quality of life, the questionnaire was administered by the study Pharmacist at base line, first follow up, second follow up and final follow up.

Measuring Blood Pressure

At Base line and at each of the three follow-ups the patient's BP was recorded.

Measuring adherence

Patient adherence therapy was evaluated by using the Morisky 8 medication adherence questionnaire. The questionnaire contains 8 questions. Each Question having individual score. Based upon the score the adherence was classified as, if the score is 0 for all questions the Patient is having high adherence, if the score is between 1-2 the patient is medium adherent, if the score is >2 the patient is low adherent. In order to determine the effect of education on patients medication adherence, the morisky 8 questionnaire was administered at base line, second (30th day), third(60th day), last (90th day).

Results

A total 130 patients were enrolled in to studt.15 patients were lost to follow up. There was no significance difference ($p>0.005$) seen between the baseline values of the two groups with respect to Gender, Age, Social history, Family history, Co-morbidities and number of medicines being taken.. The demographic details of the 115 patients who have completed the study is presented in the following figures

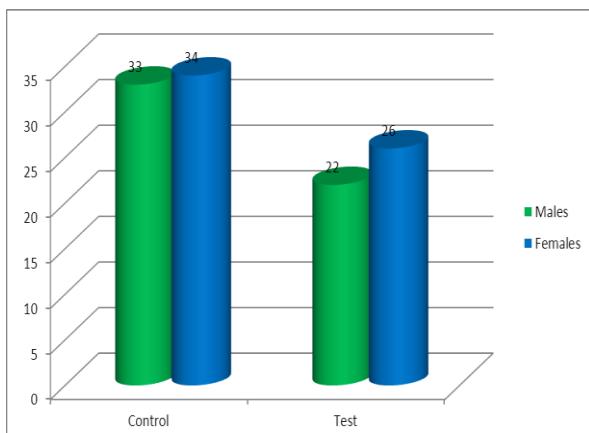


Figure 1: Comparison of Gender in Test & Control group

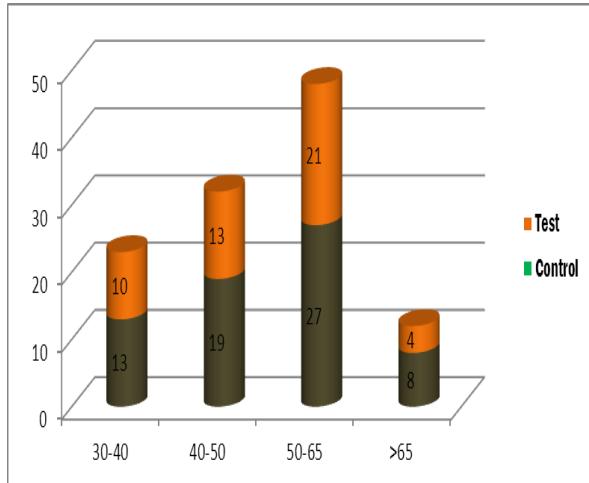


Figure 2: Comparison of Age in Test and Control groups

Figure 2 shows that comparison of Age in both test and control group. In test group 10 members range from 30-40 years, 13 members range from 40-50 years, 21 members range from 50-65 years, 4 members are above 65 years. In Control group 13 members range from 30-40 years, 19 members range from 40-50 years, 27 members range from 50-65 years, 8 members are above 65 years.

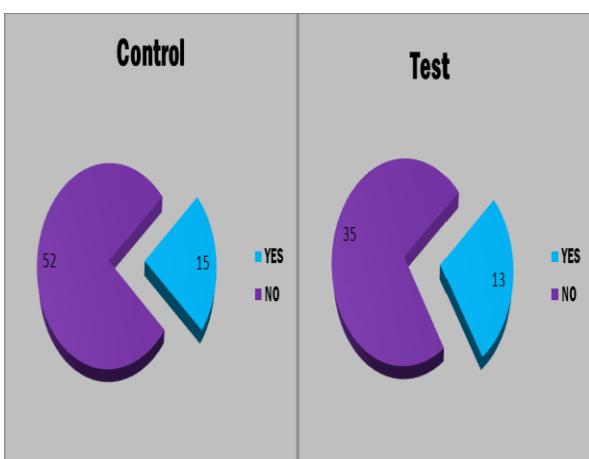


Figure 3: Comparison of Family history in Control and Test group

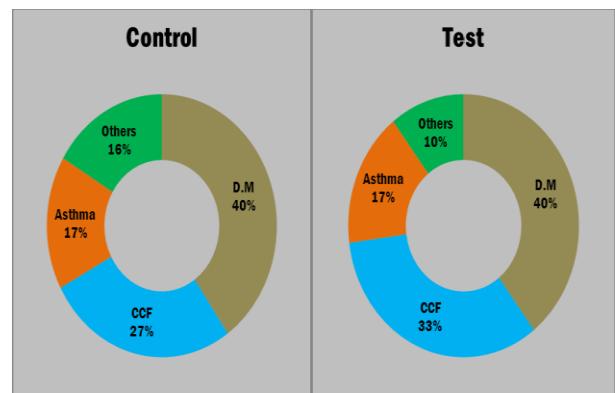
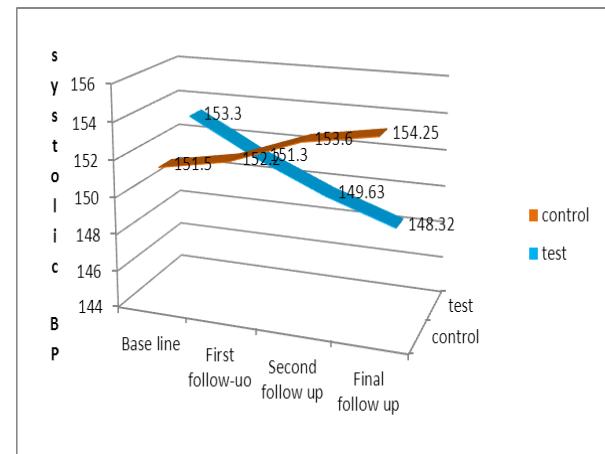


Figure 4: Comparison of Co-morbidities in Test and Control group

Figure 4 shows that comparison of Co-morbidities in both test and control group. In test group 40% of patients are having diabetes mellitus, 33% are of CCF, 17% are of asthma and 10% of other co-morbidities. In Control group 40% of patients are having diabetes mellitus, 27% are of



CCF, 17% are of asthma and 16% of other co-morbidities. Figure 5: Mean systolic blood pressure seen at each follow up: control vs test group

Comparison of Quality of life scores with respect to the individual sub scales of the SF- 36v2 Health survey

The SF-36v2 survey has six subscales like general, functional, psychological, social/family, positive wellbeing, physical. In the test group , at second and third follow up, there was a significant increase in the scores of all the subscales of SF-36v2TM health survey when compared to base line. In the control group there was no significant change observed in the scores of individual subscales.

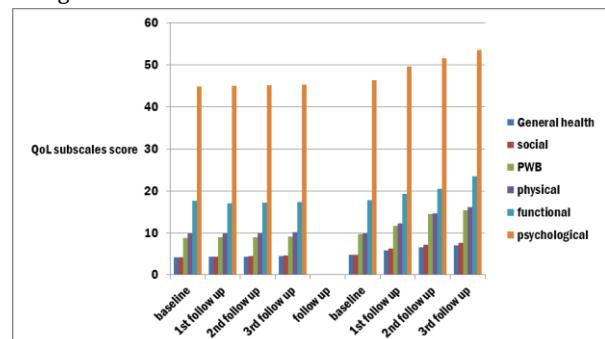


Figure 9: Comparison of Quality of life scores with respect to the individual sub scales of the SF-36v2 Health survey.

Discussion

A total 130 patients were enrolled in to study 15 patients were lost to follow up. The demographic details of both groups compared with respect to Gender, Age, Social history, Family history, Co-morbidities and number of medicines being taken.. The demographic details of the 115 patients have completed the study.

Blood pressure changes seen in the study patients. One of the main objectives of our study was to measure the impact of education on the blood pressure of hypertensive patients who visited the study sites. At base line there was no significant difference ($p >0.05$) between the systolic and diastolic blood pressure of the two group. At final follow up, a significantly ($p<0.05$) some large number of patients in the test group had achieved better blood pressure control compared to the base line. Reduction in systolic and diastolic blood pressure were seen at almost all the three follow up in the both control and test group. However, the decrease in blood pressure in the test group was statistically significant.

Regarding quality of life we are going to measure the SF-36v2 survey has six subscales like general, functional, psychological, social/family, positive wellbeing, physical. In the test group, at second and third follow up, there was a significant increase in the scores of all the subscales of SF-36v2TM health survey when compared to base line. In the control group there was no significant change observed in the scores of individual subscales.

Change in the score of individual sub scale seen across the follow up in both groups. The general health scores of the control group patients did not change significantly ($p>0.005$) from baseline to final follow up and in Test group the general health subscale score of the test group patients improved significantly from baseline to second follow up($p=0.042$) and base line to final follow up($p=<0.001$).

The functional scores of the control group patients did not change significantly ($p>0.005$) from baseline to final follow up and the functional subscale score of the test group patients improved significantly from baseline to second follow up($p=<0.001$) and base line to final follow up($p=0.005$). The Psychological subscale score of the control group patients did not change significantly from baseline to second follow up($p>0.05$) and base line to final follow up($p>0.05$).

Conclusion

The study concludes that hypertension affects the quality of life of patients and the education has a major role in improving the healthcare outcomes. The treatment of hypertension is usually long term, and its success will depend on the effects of the drug regimen on the patient's quality of life. The use of health related quality of life assessment in antihypertensive studies and in routine clinical practice provides another opportunity to optimize a patient's regimen for short- and long-term hypertension

control in a cost-effective manner. At the end of the study the patients in the test group had better blood pressure values and better scores in all six subscales of the SF-36v2 health survey questionnaire. These patients also showed improved adherence and KAP score at the final follow up. A clinical pharmacist can play a major role in management of chronic disorders by providing pharmaceutical care services.

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Conflict of Interest

No Conflict of Interest

Inform Consent

Not required

Ethical Statement

Not required

Author Contribution

All authors participate in the work

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