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THE MOST RELIABLE APPROCH TO DEFEAT 'A SILENT KILLER'

Rachana R Yeligar ^{*1} and Kushal A. Shah ²

Department of Pharmaceutical Analysis, National College of Pharmacy ¹, Shivamogga

Department of Pharmacy Management, Manipal College of Pharmaceutical Sciences, Manipal University ², Manipal,

ABSTRACT

Yoga and exercise are an efficient way of declining patients of hypertension in present and in future. However it has been shown that Non-pharmacological intervention prevent the rising blood pressure and reduce it up to maximum extent, near to the normal. This experiment was designed to determine effectiveness of Yoga and exercises therapies to control blood pressure of hypertension patients. The objective was to employ these Non pharmacological therapies to know it's effectiveness in treatment of hypertension along with pharmacological therapies in conventional way. We tested the short-term efficacy and feasibility to the treatment of hypertension in a small South Gujarat's industry employees who are living under modern life-style. This was follow-up by physician for 12 months. Of 1031 a small South Gujarat's industry employees screened, 221 individuals (aged 35 to 60 years) were selected with hypertension. Mental and physical stress-reduction approaches (Meditation and progressive muscle relaxation) were compared with a life-style modification education control program and with each other. The primary outcome measures were changes in clinical diastolic and systolic pressures from baseline to final follow-up. The secondary measures were linear blood pressure trends, home blood pressure, and intervention compliance. Adjusted for significance baseline difference and compared with control, Yoga and meditation reduced systolic pressure by 10.3 mmHg and diastolic pressure by 7.5 mm Hg. Progressive muscle relaxation or Exercise lowered systolic pressure by 4.7 mm Hg and diastolic pressure by 3.1 mm Hg. The reduction in the Yoga and Medication group were significantly greater than in the progressive muscle relaxation group for both systolic pressure and diastolic pressure. Compliance was high in both stress-reduction groups. Home systolic but not diastolic pressure changes were similar to clinical changes. Selected mental and physical stress-reduction techniques demonstrated efficacy in reducing hypertension in this sample of an industry employees. Of the two techniques, Meditation was approximately twice as effective as progressive muscle relaxation. If these both should follow together, it will create long term effects and generalized ability to hypertension patients.

Keywords:

Hypertension,
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Correspondence to author:

Rachana R Yeligar

Department of Pharmaceutical
Analysis, National College of
Pharmacy,
Shivamogga
E- mail:
rachana1404@gmail.com

INTRODUCTION: Hypertension, a “psychological classical silent killer”, is the hallmark of various cardiovascular disorders mainly occurring due to increase in the total peripheral resistance because of several etiological factors, like;

- Genetic (familial history of vascular disorders)
- Obesity and glucose intolerance
- High salt intake
- Cigarette smoking
- Heavy alcohol consumption
- Increase serum rennin levels

Due to plenty of etiological factors, the hypertension would become a greater global burden in the next 15-20 years. The estimated total no of people with hypertension in the country and worldwide is as follows:

	2000	2025
World wide	97.2 Cr	156 Cr
India	11.82 Cr	21.25 Cr

According to the statistical analysis of world wide as stated above, the percentage of hypertension in the individual gender can be stated as below:

	2000	2025
Men	26.6%	29.0%
Women	26.1%	29.5%
Total	26.4%	29.2%

It is predicted that the total no of hypertensive patients would be increased by about 60%, a total of 1.56 billion high blood pressure sufferers, by 2025. For more than 50% of all stroke deaths &

about 25% of coronary heart disease deaths, in which main cause is hypertension.

In India less than 45% of people were aware of the disease and only half of them were under treatment. As per latest research, the hypertension is an important and growing public health challenge worldwide and is directly associated with fast changing life styles. An individual’s diet and weight loss play an important role in the development and persistence of hypertension, which is known as Non pharmacological Intervention. Thus, simple changes seem to be more effective in treatment of hypertension. These are as follows:

- Dietary Changes
 - Reducing sodium intake
 - Modified Vegetable diet
- Weight loss
- Yoga & Stress reduction
- Regular exercises
- Smoking cessation
- Reducing alcohol consumption

Yoga and exercise (muscle relaxation) are a science and its practice harmonizes the body and mind. In couple, they are immensely useful for promoting total health. It also works effectively as a therapy in three ways – preventive, curative, rehabilitative. Hypertension can regress with proper life-style management and practice of Yoga/Meditation and muscle relaxation. By adopting a proper life-style and making Yoga and exercise – a way of life, one can surely prevent as well as cure Hypertension.

Objective:

- These enhance the therapeutic efficacy of the antihypertensive medications.
- They even eliminate the need for medications.
- They have no side effects.

- They reduce a person’s overall risk of cardiovascular disorders.

If these measures are employed in early stages they may even prevent the occurrence of hypertension in individuals who are at a risk of this condition.

Methodology:

- The works were carried out by case-book study, Personal interactions with physicians and patients.
- The incidences were observed in case of people who are living under modern life style.
- This observation occurred in a small South Gujarat’s industry whose 180 employees suffered with only hypertension, 35 suffered with hypertension & diabetes mellitus and 06 under treatment of hypertension, diabetes mellitus & ischemic heart disease out of 1031 employees in 2007.
- From last 1 year, they are followed yoga (Meditation, Pranayam-half hour a day) and exercises (half hour walking and mild exercises) instruction given by physicians and yoga instructor.
- Out of 221 patients, we personally interacted with 36 patients and got their view and present situation in hypertension and physician provides the data regarding other patients.
- Results were drawn in the form of graphs and interpretation was carried out.

RESULTS AND DISCUSSION:

- The result shows that patients who were followed instruction given by physicians and yoga instructor, their blood pressure is under control from within a month and still normal (from last 2 years). If they missed their medication sometime, they do not have any problem of rising of blood pressure.
- As per medical examination of employees conducted by industry after a year, number of patients reduced by 15% and they had benefits from above therapies.
- Because of exercises and yoga, many people able to lose their weight, so which beneficial to again reduce and control pressure.
- But if patients should neglect or stop the instruction, they condition may be relapse.
- 95% patients’ blood pressure reduced to - 10.3/5.5 only with yoga and exercises.

TABLE 1: CHANGE IN BLOOD PRESSURE AFTER YOGA AND EXERCISES (IN MMHG)

Modification	Changes In Blood Pressure (mm Hg)	Benefits
Exercise	-4.7/3.1	Reduce blood pressure to about 5-15 mmHg Enhance patient’s well being
Yoga & Stress Reduction	-10.3/7.5	Reduce the amount of stress Eliminate extra fat from body which help to lose weight

TABLE 2: AS PER MEDICAL EXAMINATION OF EMPLOYEES FROM 2007 TO 2009; TOTAL NO OF EMPLOYEES: 1031

	No. of patients in 2007	No. of Patients in 2008	No. of Patients in 2009
Hypertension	180	153	135
Hypertension + Diabetes	35	30	27
Over Weight	534	450	376
Hypertension + Diabetes +I. H. D	06	06	06

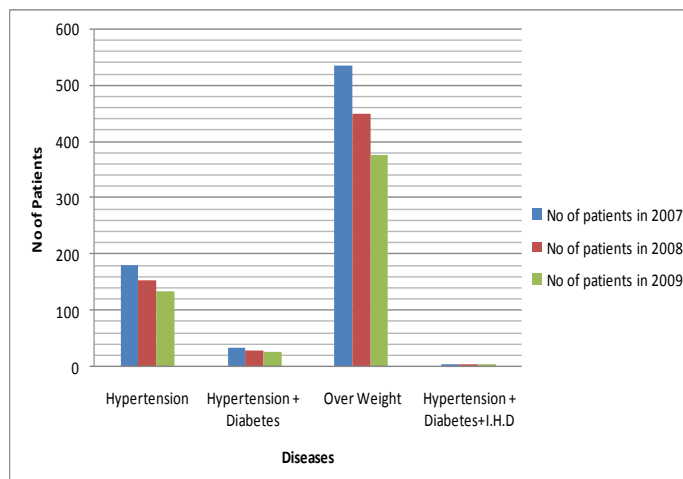


FIG. 1: AS PER MEDICAL EXAMINATION OF EMPLOYEES FROM 2007 TO 2009; TOTAL NO OF EMPLOYEES: 1031

CONCLUSION: The following studies show that Non Pharmacological interventions can control hypertension.

1. Patients with elevated blood pressure should follow yoga and regular exercise.
2. Reduced sodium intake may help people on antihypertensive drugs to stop their

medication while maintaining good blood pressure control.

3. The findings suggest that long term physical exercise improves endothelium dependent vaso-relaxation through an increase in the release of nitric oxide in the normotensives as well as hypertensive patients.
4. Comprehensive lifestyle modifications are more feasible and show beneficial effects.
5. The meta-analysis shows that weight loss is important for the prevention and treatment of hypertension which directly reduce if patients should follow instruction of yoga and exercises.

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