Diagnosing the Missing Cases of Hypertension: An Opportunistic Screening among Engineers in a Training Institute in Aurangabad, Maharashtra, India

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Abstract

Objective: 1) To study knowledge and awareness about risk factors and complications of hypertension among engineers.
2) To identify missing opportunities to diagnose hypertension.

Methodology: A questionnaire based cross-sectional study was conducted during the month of July 2013 amongst 80 engineers undergoing training in WALMI (water and land management institute), Aurangabad.

Results: The knowledge about complications associated with hypertension was considerably low. For instance, only 15.6% believed that hypertension can cause kidney failure while 40.6% of the respondents agreed very much that severe hypertension can lead to heart attack which could lead to the death of the affected person. Only 9.4% agreed that hypertension can result to retinal failure. Among 80 participants we found 22 persons having blood pressure above 140/90 mm hg on both readings of which only 10 were aware of their hypertension of which only 6 were taking medicines of which only 4 persons were taking regular medicine and follows all advice given by doctor about life style modification.

Conclusion: In the main time, one of the cornerstones to achieving positive health behavior towards hypertension is through public education. This calls for compulsory on-job screening and educative programs in the form of seminars and conferences for all categories of staff.

Key words: Awareness, Hypertension, High blood pressure, Knowledge.

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Introduction

In medical terms, hypertension is a blood pressure of 140/90 mmHg or more, based on at least two readings on separate occasions.[1-3] The term is used to mean the same medical condition with high blood pressure (HBP).[4] A significant number of studies have also established clear evidence for a relationship between occupational stressors and elevation of blood pressure.[5] Increased risks of high blood pressure are connected with chronic job strain.[6,7] Despite effective therapies and lifestyle interventions, optimal control of blood pressure remains very serious health challenges to health professionals especially in most developing countries like India. This study examined knowledge about the risk factors and complications associated with hypertension among the sectional Engineers being trained in WALMI (water and land management institute), Aurangabad. Hypertension is being known as silent killer is mainly due to ignorance in concept of screening even in professional intellectuals. This became necessary against the backdrop that identification of gaps in people's knowledge about hypertension is capable of aiding the development of messages to enhance that knowledge. This study also highlights the novel idea to identify hypertensive in any professional, social or educational gatherings.

Materials and Methods

A cross sectional study was conducted in the month of July 2013 in professional training institute named WALMI (water and land management institute) located about 6 Km away from Aurangabad. WALMI, Aurangabad is widely known as the first and foremost training Institute in Water and land management all over the country. This institute organizes various training sessions of various professional workers all over India. This study was planned in guest lecture by health expert in a training institute to investigate the knowledge and awareness of engineers but one extra attempt was taken to screen all participants in study for hypertension. A pretested questionnaire was used to assess the knowledge about hypertension and attitude towards treatment and lifestyle modification in engineers. Questionnaire consisted of questions about risk factors, complications, and control and treatment modalities of hypertension. On the day of study 85 engineers were present. Questionnaire was given to all.

Out of 85 participants 83 have returned the questionnaire.

Out of which 2 persons have given incomplete questionnaire. So we analyzed 80 questionnaires. Measurement of blood pressure was done using mercury sphygmomanometer as a screening procedure among 80 sectional engineers undergoing training at a single day. Two reading were taken in sitting position after a rest of 5 minutes .persons having blood pressure measurement above 140/90 mm hg on both occasion was diagnosed as hypertensive. Persons who were hypertensive were asked whether they are aware of their BP, if aware whether taking treatment regularly etc. Analysis was done manually by calculating the percentages of various responses obtained in questionnaire.

Results

The socio-demographic features of the respondents indicated that 15 were females while 65 were males. All the respondents were between the ages of 24 and 57 with mean age of 47.19 years. The 59.6 % respondents fell between the ages of 50 to 57.

Awareness of risk factors of hypertension

The knowledge of the risk factors attributed to hypertension was relatively low among the respondents. Fig. 1 shows knowledge of risk factors in hypertension among the respondents. About 38% of respondents know that overweight and sedentary life style is a risk factor for hypertension while about 22 percent of individuals think that hypertension is common in family members. Surprisingly about 22 percent of respondents don't know anything about the risk factors of hypertension.

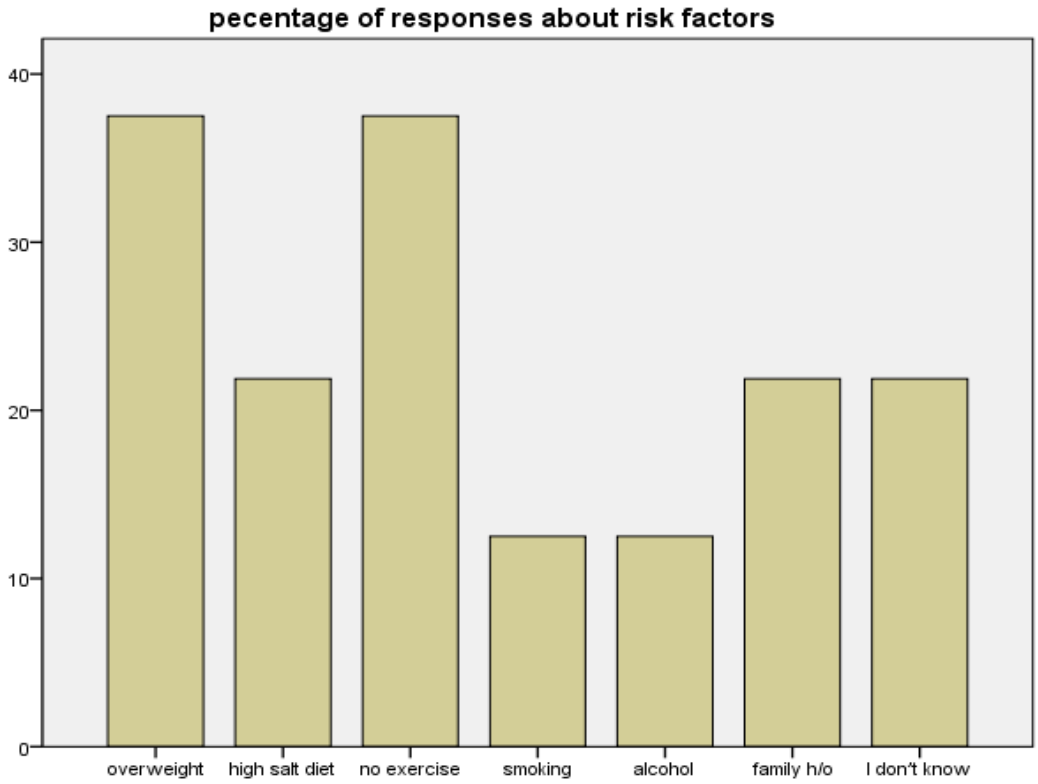

Fig. 1: Percentage of responses about risk factors

Awareness of the complications of hypertension

The knowledge about complications associated with hypertension was considerably low. For instance, only 15.6% believed that hypertension can cause kidney failure while 40.6% of the respondents agreed very much that severe hypertension can lead to heart attack which could lead to the death of the affected person. Only 9.4% agreed that hypertension can result to retinal failure and only 18 percent of individuals know that cerebrovascular accidents can occur with increase blood pressure. Fig. 2 shows the details of respondents about the complications.

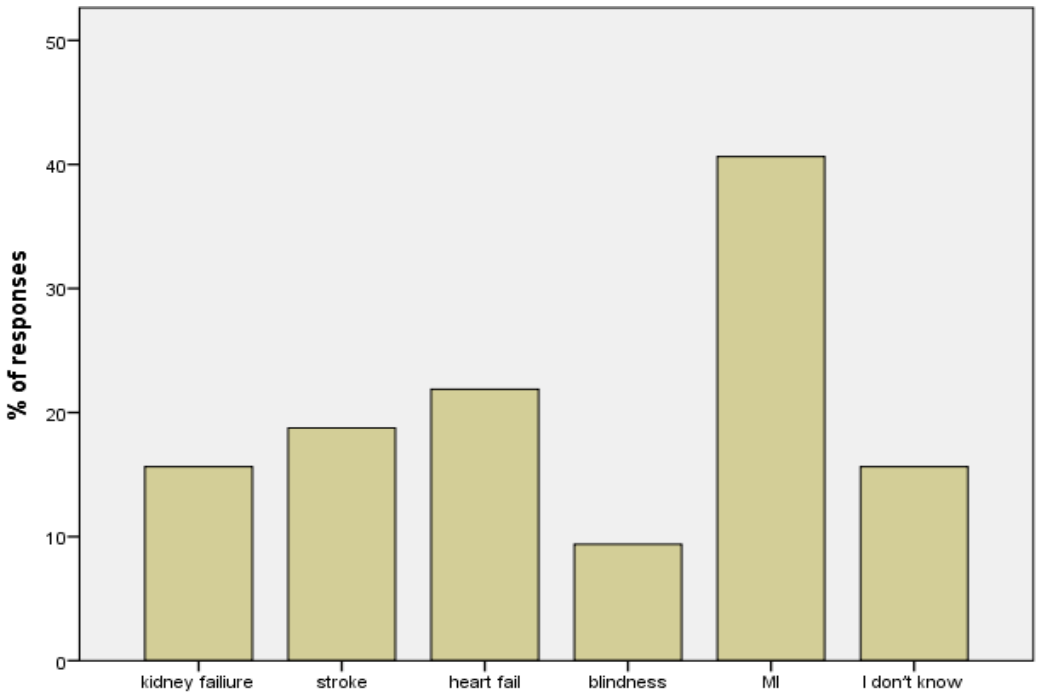

Fig. 2: Percentage distribution of repondent's knowledge about complications of hypertension.

Attitude of patients towards their disease

We diagnosed 22 persons having blood pressure above 140/90 mm hg on both readings. But only 10 of 22 were aware of their hypertension of which only 6 were taking medicines of which only 4 persons were taking regular medicine and follows all advice given by doctor about life style modification(Fig. 3).

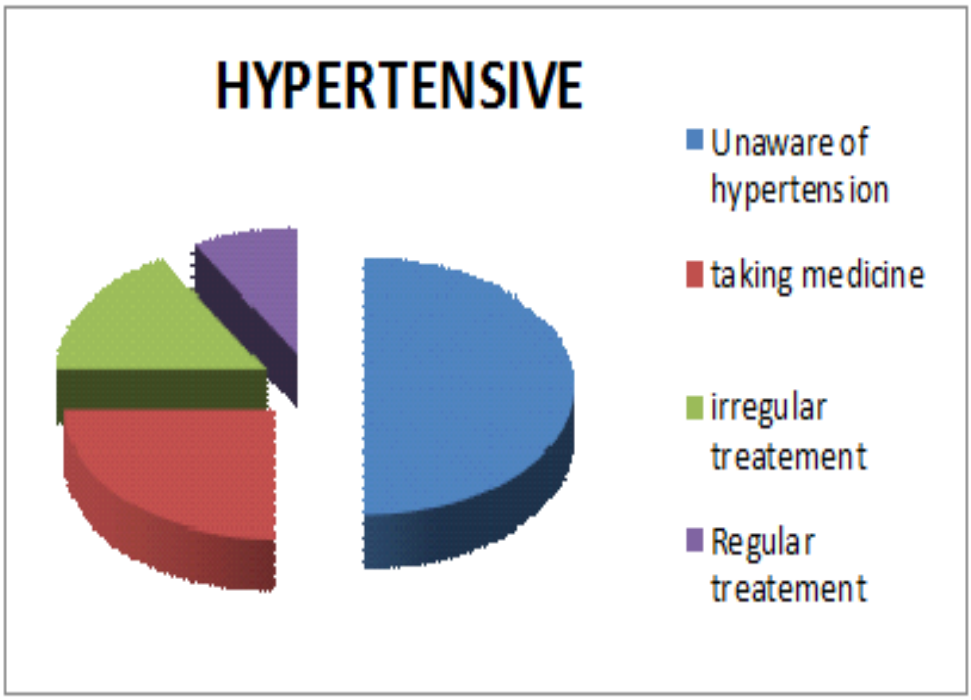

Fig. 3: Attitude of hypertensive towards their disease.

Discussion

Above mentioned data clearly indicates that one of the most prevalent non communicable diseases also known as "silent killer" remains undiagnosed in highly qualified and wealthy group of peoples.[8] Incidental diagnosis of hypertensive in such setup has created a ray of hope to practice such screening in any of gatherings like our study. Health related lectures are being organized in many of institutions or work places. If an extra effort of taking blood pressure of all participants or high risk groups like above 40 years to be concise is taken might lead to expose the "silent killer" that is hypertension and attenuate the complication of it.

The study revealed that awareness about the risk factors of hypertension in one of most qualified group of peoples was low. It was shown that 12.5% agreed that smoking is a risk factor in hypertension. About the same percentage thought that excess alcohol intakes can increase the blood pressure level. Only 21.9% believed that hypertension can be hereditary. It can therefore be deduced from this that knowledge about the risk factors associated with hypertension is inadequate despite the fact that the study was conducted in well-educated group in whom knowledge is expected to be high. This finding is supported in a study by kusuma et al.[7], Lee et al.[8] and Markovitz et al.[9] which showed that only 14.2% knows that smoking is a risk factor for hypertension and about 25% know that hypertension can be hereditary. Inadequate knowledge about the risk factors associated with the high blood pressure among the qualified persons was also shown in a study by Blakrishn et al.[10] among professors in a university which revealed that only 24% think that high salt diet and 37% think that obesity is a risk factor for hypertension. Our study also revealed that 21.8% of respondents don't know anything about the risk factors of hypertension and about 37% of respondents don't know that sedentary life style is a risk factor of hypertension. Similar observation were noted in a study by Mulunde et al[11] in engineers that 39.2% don't think that sedentary life style is a risk factor of hypertension and about 24% don't know anything about hypertension. Especially among the studied population, hypertension was considered a very serious health problem. It was believed that hypertension if not managed properly could lead to death. About 18.4% of the respondents quite agreed that stroke is one of the complications associated with hypertension although very few subjects associated hypertension to retinal failure. About 40% agreed very much that hypertension can lead to heart attack which could eventually lead to death. This contradicts Kusuma et al.[7] finding among neo and settled migrants in New Delhi, India where a 52% of participants did not believe that hypertension could lead to complications. The difference in findings can be explained by the socioeconomic factors of the subjects. Kusuma et al.[8] in another study among the migrants in New Delhi found that awareness and knowledge about hypertension and its consequences were inadequate despite being perceived as serious health problem. In a recent study in Nigeria, Ike et al.[12] found a poor level of perception of hypertension and awareness of the lifestyle modification measures, but discovered a high-level of enthusiasm on the part of the participants to adopt the lifestyle measures to avoid complications. However, Oliveria et al.[13] have observed that it is possible for people to demonstrate an awareness of hypertension but not having a comprehensive understanding of the health condition. This creates an opportunity in the studied institution to focus on educational programs that would have direct impact on positive health behaviors. According to Viera et al.[14] the need to increase awareness about hypertension and improve positive health behavior in the United States of America led to the establishment of the National High Blood Pressure Education Programme (NHBPEP). NHBPEP has, to a large extent, achieved its mandate. Today, research has shown that more than 75% of Americans are aware of the relationship between hypertension, strokes and heart disease.[15,16] A study by Dawes et al.[17] found a positive impact of patient's education booklet and BP tracker on knowledge about hypertension. Therefore, there is a room for public education in the study area to avoid the devastating consequences of what can be called "half knowledge" about hypertension.

Conclusions

The study has revealed that knowledge about the risk factors and attitude toward hypertension was poor. Perhaps, further qualitative study might be required to probe deep into the fundamental reasons for the negative health behaviors towards hypertension. In the main time, one of the cornerstones to achieving positive health behavior towards hypertension is through public education. This calls for compulsory on-job screening and educative programs in the form of seminars and conferences for all categories of staff. If an extra effort of taking blood pressure of all participants in such gatherings like in our study or any work place or educational gatherings or in high risk groups like above 40 years to be concise is taken might lead to expose the "silent killer" that is hypertension and attenuate the complication of it.

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