

Cross Sectional Study of Hypertension among Patients Attending the Urban Health Centre of Tertiary Care Hospital

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Abstract

Original Research Article

Hypertension is one of the most important risk factors for non-communicable diseases burden in India. It is often called as the “Silent Killer”. We conducted a study to find out the magnitude of hypertension in an urban slum community; as such attempt was never done before. **Aim:** To analyse the magnitude of hypertension in the urban slum community. **Objectives:** -1) To find out relationship of Hypertension with increasing age. 2) To find out relation between hypertension & addictions namely, smoking and alcoholism. **Materials and Methods:** We had conducted a Cross-sectional study of Hypertension among patients above the age of 30 years visiting the general outpatient department at the urban health centre of a tertiary care hospital. A pre formed, semi structured proforma was developed and got it validated. Consents of the participants were taken. **Result:** We found out that 57.15% women and 46.15% men were hypertensive in total 109 participants. In our study, we found strong relation between advancing age and development of hypertension. Out of 32 participants who were smokers, 59.38% (19) were hypertensive showing positive correlation of smoking and hypertension. Out of 53 tobacco addicts, 66.04% (35) were hypertensive. Out of 20 participants who were alcoholics, 70% (14) individuals were hypertensive. There should be continuing IEC and BCC activities to reduce the onset of incidence and prevent the complications of hypertension.

Keywords: Hypertension, Urban Slum Population, Smoking, Alcoholism & Hypertension.**Copyright © 2019:** This is an open-access article distributed under the terms of the Creative Commons Attribution license which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use (NonCommercial, or CC-BY-NC) provided the original author and source are credited.

INTRODUCTION

Hypertension is prevalent in India and it is the major risk factor for non-communicable disease burden. It is one of the most important preventable causes of premature death worldwide. Many who are afflicted feel no discomfort until a medical crisis i.e. myocardial infarction or a stroke - strikes. As a consequence, high blood pressure is often called as the “Silent Killer [1]”. NFHS-4 evaluated hypertension prevalence in younger men (15–54 years) and women (15–49 years) and reported hypertension in 13.8% men and 8.8% women with an overall prevalence of 11.3%[2]. Age-adjusted hypertension was more in men (24.5%) than women (20.0%)[3]. About 33% urban and 25% rural Indians are hypertensive. Of these, 25% rural and 42% urban Indians are aware of their hypertensive status. Only 25% rural and 38% of urban Indians are being treated for hypertension [4]. Hypertension is the measure health issue to be addressed upon with low awareness and poor control. To improve community health, hypertension has to be taken with priority. Patients from

slum attending the urban health centre were never studied before. Hence this study is undertaken.

Aim

To find out the magnitude of hypertension in the urban slum community

Objectives

- To find out relationship of Hypertension with increasing age.
- To find out relation between hypertension & addictions namely, smoking and alcoholism.

MATERIALS AND METHODS

We had conducted a Cross-sectional study of Hypertension among patients above the age of 30 years visiting the general outpatient department at the urban health centre of a tertiary care hospital.

Inclusion Criteria

- Patients more than 30 years of age of both sexes attending OPD.

- Patients who are willing to give consent.

Exclusion Criteria

- Patients less than 30 years of age of both sexes attending OPD
- Patients who are not willing to give consent

The study was conducted on both the sexes to determine if there are any sex-linked predilections for the development of hypertension.

A pre formed, semi structured proforma was developed and got it validated. Consents of the participants were taken. The proforma contains identification data, examination of blood pressure, and information about hypertension awareness, treatment and control. Total 109 participants aged 30 years were examined and administered proforma.

METHOD OF TAKING BLOOD PRESSURE

Blood pressure was measured systematically as per ESC/ESH guidelines of hypertension [5]. Measurement was taken after at least 5 minutes of rest. Measurement was taken with mercury sphygmomanometer in sitting position in the chair with their backs supported. Arms bared and supported at heart level.

- Both SBP and DBP were recorded. The first appearance of sound (phase 1) is used to define SBP. The disappearance of sound (phase 5) is used to define DBP.
- Two or more readings separated by 2 minutes were averaged out. If the first two readings differed by more than 5 mm Hg, additional readings was obtained and averaged.

TABLES & DISCUSSION

Total 109 patients were examined. Out of which, 70 were females & 39 were male patients. Out of 70 females, 57.15% (40) were hypertensive & out of 39 males, 46.15% (18) were hypertensive showing the worrisome percentage of existing hypertension in the urban slum community with more percentage of female hypertensive patients than male hypertensive patients.

Peter N. Lee *et al.* also found a negative correlation between sex differences and hypertension [6]. Similarly Gilbert *et al.* did not find any gender differences [7].

On the contrary, Sydney Hornby *et al.* found a positive correlation between hypertension and sex differences [8]. Kathryn Sandberg also found a positive association [9].

In our study, we surveyed 103 people from different age group. Out of 72 individual between the ages of 30-50 years, 40.28% (29) of individuals were hypertensive and out of 37 individuals above the age of 50 years, 78.37% (29) individuals were hypertensive. Thus there is a strong relation between increasing age and development of hypertension. According to the P value, the event is statistically highly significant.

Luft FC *et al.* found a positive correlation between older age and hypertension [10] Zemel MB *et al.* also found association between advancing age and occurrence of hypertension [11].

Hypertension is an iceberg of disease and often undetected disorder in the community. In the present day stressful scenario, hypertension has become increasingly common in the economically productive age group of 30 to 50 years.

Table-1: Hypertension in smokers

| Smoking | Blood Pressure | | | | Total | |
|---------|----------------|-------|--------------|-------|--------|------|
| | Normotensive | | Hypertensive | | Number | % |
| | Number | % | Number | % | | |
| No | 38 | 49.35 | 39 | 50.65 | 77 | 100% |
| Yes | 13 | 40.63 | 19 | 59.38 | 32 | 100% |
| Total | 51 | 46.78 | 58 | 53.22 | 109 | 100% |

Chi-Square = 0.691 and P – value = 0.406

Table 1 shows correlation of hypertension and smoking. The analysis of the relation of hypertension to smoking showed that out of 32 smokers, 59.38% (19) individuals were hypertensive. Though statistically insignificant, majority of smoker patients were hypertensive.

Samuel J. Mann *et al.* [12], Duk-Hee Lee *et al.* [13] found a positive correlation between smoking and hypertension.

Table-2: Study of Hypertension in relation to Tobacco addiction

| Tobacco Addiction | Blood Pressure | | | | Total | |
|-------------------|----------------|-------|--------------|-------|--------|------|
| | Normotensive | | Hypertensive | | Number | % |
| | Number | % | Number | % | | |
| No | 33 | 58.92 | 23 | 41.07 | 56 | 100% |
| Yes | 18 | 33.96 | 35 | 66.04 | 53 | 100% |
| Total | 51 | 46.78 | 58 | 53.22 | 109 | 100% |

Chi-Square = 6.817 and P – value = 0.009

The analysis of the relation between hypertension and tobacco consumption shows that out of 53 tobacco addicts, 66.04% (35) were hypertensive

showing a strong positive relation. According to the P value, the event is statistically significant.

Table-3: Study of Hypertension in relation to alcoholism

| Alcoholism | Blood Pressure | | | | Total | |
|------------|----------------|-------|--------------|-------|--------|------|
| | Normotensive | | Hypertensive | | Number | % |
| | Number | % | Number | % | | |
| No | 45 | 50.56 | 44 | 49.44 | 89 | 100% |
| Yes | 6 | 30.00 | 14 | 70.00 | 20 | 100% |
| Total | 51 | 46.78 | 58 | 53.22 | 109 | 100% |

Chi-Square = 2.773 and P- value = 0.096

Table 3 shows the relation of hypertension and alcoholism. We found that, out of 20 alcoholics 70% (14) individuals were hypertensive showing a strong positive association. According to the P value, the event is statistically significant.

The study conducted by DG Beavers *et al.* showed a positive correlation between alcohol consumption and hypertension [14]. Similarly, Arthur I Klatsky *et al.* found an association between alcoholism and hypertension [15].

CONCLUSION

- Analysis of the project shows that in our study population, out of 70 women participants, 57.15% (40) were hypertensive and out of 37 male participants, 46.15% (18) were hypertensive showing that more female participants were hypertensive than male participants.
- Out of 72 individuals between the age group of 30-50, 40.28% (29) were hypertensive and out of 37 individuals above the age of 50 years, 78.37% (29) were hypertensive. Thus, we found strong relation between advancing age and development of hypertension
- Out of 32 participants who were smokers, 59.38% (19) were hypertensive showing positive correlation of smoking and hypertension.
- Out of 53 tobacco addicts, 66.04% (35) were hypertensive showing a strong positive relation between tobacco consumption and hypertension.
- Out of 20 participants who were alcoholics, 70% (14) individuals were hypertensive showing a strong positive association between alcoholism and hypertension which was statistically significant as well. (P value = 0.096)

We would like to conclude with the recommendation of continue IEC (Information Education Communication)& BCC (Behavior Change Communication) activities to increase awareness about hypertension and its complications so as to reduce the incidence and prevent the complications of hypertension.

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