

PREVALENCE OF HYPERTENSION AMONG THE PATIENTS WHO ATTEND MEDICINE OUTDOOR OF DHAKA MEDICAL COLLEGE HOSPITAL

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Abstract:

Introduction: Worldwide, Hypertension is the established risk factor for many premature cardiovascular morbidity and mortality. Prevalence of hypertension depends on both the racial composition of the population and the criteria used to define the condition and on how extensively the evaluation is done.

Objective: To find out the Prevalence of hypertension and also the variation of Prevalence of hypertension, at different age group, rural to urban population, association with other medical conditions and family history of hypertension among the patients who come to seek treatment in Medicine OPD, Dhaka Medical College Hospital.

Materials and Methods: This prospective study was carried out in the medicine outdoor of Dhaka Medical College Hospital during the whole month of July'2007. The patients who attend medicine OPD, DMCH during the month of July'2007 to seek medical treatment were included in the study. Exclusion criteria was who denied to measure Blood pressure or non cooperation of the patient. The diagnosis and classification of hypertension was done according to the JNC-7 report.

A subject was considered hypertensive if one has an average SBP >140 mm of Hg of DBP >90 mm of Hg or if he/ she was already diagnosed as a hypertensive with or without anti-hypertensive medication.

Blood pressure (BP) was measured twice in two arms by using sphygmomanometer. Among the newly detected hypertensive patients, blood pressure was again measured after 15 minutes of rest in handled chair, in calm environment. After second measurement if BP is still more than or equal to 140/90 mmHg, they were detected as hypertensive. After detecting hypertensive patient, their all data are recorded in a structured questionnaire.

Results: After proper measurement of BP of 17,792 patients, hypertension was found in 554 patient (3.11%) of them 181 were male (32.67%) and 373 were female (67.33%). So, Prevalence of hypertension among the patient who attend medicine outdoor of DMCH is about 3.11% and slight this female predominance.

Conclusion: This data may not exactly reflect the actual Prevalence of hypertension as it is outdoor hospital based but give an idea about the Prevalence of hypertension among the patient who attend for treatment in a tertiary based hospital.

Introduction:

Cardiovascular disease is a major health problem thought the world and a common cause of premature morbidity and mortality. Hypertension is an established major risk factor and the leading cause of cardiovascular disease worldwide, the rate of hypertension and its complications are decreasing in developed countries whereas it is increasing in

developing countries.¹⁻⁴ Prevalence of hypertension depends on both the racial composition of the population and the criteria used to define the condition. It also depends on how extensively the evaluation is done.⁵ Prevalence of hypertension vary from country to country, population to population and rural to urban. Prevalence of hypertension increases with age and more common in blacks than in whites.⁶ Dubey

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VD⁷ carried out one of the earliest study in India (1954), documented 4% Prevalence of hypertension (criteria;>160/95) amongst industrial workers of kanpur. In 1984 wasir Hs et al⁸ reported 3% Prevalence of hypertension (Criteria :>160/95) in delhi. Another two studies carried out in rural areas of haryana⁹ (1994-95) demonstrated 4.5% Prevalence of hypertension (JNC V Criteria).In Europe, the Prevalence of hypertension is as high as 44%, while in US, epidemiological data for the period 1999 – 2002 indicated as prevalence of 28.6%.^{10, 11}

Materials and Methods:

The objective of the study to find out Prevalence of hypertension among the patient who attend medicine outdoor of Dhaka medical college hospital. So that we can get an idea about Prevalence of hypertension among the patient who come to seek treatment at a territory based hospital. Other objective is to find out the variation of Prevalence of hypertension at different age group, rural to urban population and also to get a idea about association of other medical conditions among the hypertensive patient and is there any history of hypertension or other medical conditions among the family members of hypertensive patients.

This prospective study was carried out in the medicine outdoor of Dhaka Medical College Hospital during the whole month of July'2007. Inclusion criteria for selection of patient was all the patient who attend medicine outdoor of Dhaka Medical College Hospital during the month of July '2007 to seek medical treatment. Exclusion criteria was who denied to measure Blood pressure or non cooperation of the

patient. A subject was considered hypertensive if one has an average Systolic Blood Pressure (SBP) e"140 mm of Hg of Diastolic Blood Pressure (DBP) e" 90 mm of Hg or if he/ she was already diagnosed as a hypertensive with or without anti-hypertensive medication. The diagnosis and classification of hypertension was done according to the JNC-7 report.¹² Blood pressure (BP) was measured twice in two arms by using sphygmomanometer. Among the newly detected hypertensive patients, blood pressure was again measured after 15 minutes of rest in handled chair, in calm environment. After second measurement if BP is still more than or equal to 140/ 90 mmHg, they were detected as hypertensive. After detecting hypertensive patient, their all data are recorded in a structured questionnaire.

Results:

Study was carried out on 17792 patients; of them 554 were hypertensive (3.11% of total sample patients) with female predominance of 373 patients (67.33%) and male hypertensive patients were 181 (32.67%) [Table – I(a)].

Among the hypertensive patients 187 (33.75%) were newly diagnosed case and all ready diagnosed hypertensive patients were 367 (66.25%) [Table – I(b)].

Regarding type of hypertensive patients Diastolic Blood Pressure was high in 65.77% patients and Systolic Blood Pressure was raised in 34.22% of patients. But systolic blood pressure was high in 61.22% and diastolic blood pressure in 38.78% among the blood pressure uncontrolled diagnosed hypertensive patients [Table – II].

Table-I (a)

Number of Hypertensive patient.

Sex	No. of sample patient	Percentage(%)	Hypertensive patient	Percentage(%)
Male	8766	49.27%	181	32.67%
Female	9026	50.73%	373	67.33%
Total	17792	Total	554	3.11% of total sample Patient

Table-I (b)

Number of Hypertensive patient

Type of patient	No. of patient	(%)
New diagnosed hypertensive patientn-187 (33.75%)	187	33.75%
All ready / diagnosed hypertensive patient n-367	367	66.25%
On Anti-hypertensive treatment / drug	299	81.47%
Without treatment or discontinuation of Anti-hypertensive treatment / drug	68	18.53%

Table-II
Type of Hypertensive patient.

Type of patient	Type of hypertension	Percentage (%)
New diagnosed hypertensive patient(n - 187)	Systolic (n - 64)	34.22%
	Diastolic (n - 123)	65.77%
All ready / diagnosed hypertensive patient (n - 367)	BP Controlled (n - 106) 28.88%	-
	BP Uncontrolled (n - 261) 71.12%	Systolic (n - 160) 61.22% Diastolic (n - 101) 38.78%

Major hypertensive were between the age group of 35 – 54 years (49.64%) [Table – III].

Table-III

Age distribution of Hypertensive patient (n - 554).

Age	No. of Patient	Percentage (%)
13 – 34 Years	101	18.23%
35 – 54 Years	275	49.64%
>55 Years	178	32.13%

Most of the patients were from urban area (60.10%) and only 39.90% patients were from rural area [Table – IV].

Table-IV

Rural & Urban distribution of Hypertensive patient (n - 554).

	No. of Patient	Percentage (%)
Rural	221	39.90%
Urban	333	60.10%

Hypertensive patients were have history of some associated medical conditions. Most of 96 patients were have history of Bronchial asthma (55.17%) and next high associated medical condition was Diabetes Mellitus in 39 patients (22.41%) [Table – V].

Table-V

Associated Medical conditions of the Hypertensive patient n – 174 (31.40%)

Medical Condition	No. of Patient	Percentage (%)
Diabetes Mellitus	39	22.41%
Stroke (CVD)	11	6.32%
Bronchial Asthma	96	55.17%
CRF	17	9.77%
Others	11	6.32%

Lion share of the hypertensive patients having family history of hypertension (55.00%) and 29.73% patients were having family history of Stroke (CVD) [Table – VI].

Table-VI

Family history of different Medical conditions among the Hypertensive patient n – 380 (68.59%)

Medical Condition	No. of Patient	Percentage (%)
Diabetes Mellitus	17	4.47%
Stroke (CVD)	113	29.73%
HTN	209	55.00%
IHD	41	10.79%

Discussion:

After proper measurement of BP of 17,792 patients, hypertension was found in 554 patient (3.11%), of them 181 were male (32.67%) and 373 were female (67.33%). So, Prevalence of hypertension among the patient who attend medicine outdoor of DMCH is about 3.11% and slight female predominance. Although this will not directly reflect the prevalence of hypertension of our community because patient of all socioeconomic status do not attend Medicine Out Patient Department. But it will give an idea about the prevalence of hypertension who seek treatment at a territory hospital. Among the hypertensive patients, 187 patients (33.75%) were newly diagnosed and 367 patients (66.25%) were already diagnosed hypertensive patient. Of the already diagnosed hypertensive patients 299 (81.47%) persons were regularly taking anti-hypertensive drug and only 68 patients(18.53%) discontinued anti hypertensive drug. Regarding types of hypertension among the newly diagnosed hypertensive patients, 64 patients(34.22%) had systolic hypertension and 123 patients(65.77%)

had diastolic hypertension. So diastolic hypertension is more common among newly diagnosed hypertensive patient. Of the already diagnosed hypertensive patients, only 106 patients (28.88%) have BP controlled and most of them 261(71.12%) having uncontrolled BP. Among the persons whose BP is uncontrolled 160(61.22%) have systolic hypertension and 101(38.78%) have diastolic hypertension. So systolic hypertension is more in already diagnosed hypertensive patient. In other word it can be said that patient taking anti hypertensive failed to control systolic BP.

Hypertension increase with age and more prevalent after the age of 50.⁶ In our study most of the hypertensive patient are between he group of 35-54years, total number of patients were 275(49.64%) and then >55years, where number of patients is 198(32.13%) but interestingly 101 young patients (18.23%) were hypertensive in the age group of 13-34 years. 221(39.90%) patient were from rural area & major patient 333(60.10%) were from urban area.

Hypertensive patients are associated with different medical conditions like Diabetes Mellitus (DM), Stroke, Bronchial Asthma, Chronic Renal Failure (CRF), and others like Hypothyroidism, IHD etc. In our study, Bronchial Asthma is most prevalent associated medical condition 96(55.17%), next associated medical condition are DM 39(22.41%), Stroke 11(6.32%), CRF 17(9.77%) and others 11(6.32%).

Regarding family history; 209 patients (55.00%) had history of hypertension in their family members. There is also family history of stroke (CVD), IHD, DM in hypertensive patients, that was found 113(29.73%), 41(10.79%) and 17(4.47%) respectively.

Conclusion:

Prevalence of hypertension among the patients who attend medicine outdoor of Dhaka medical college hospital is 3.11% with slight female predominance. Although this data may not exactly reflect the actual Prevalence of hypertension as it is outdoor hospital based, but give a idea about the Prevalence of hypertension among the patient who attend for treatment in a tertiary based hospital. So, for proper evaluation of Prevalence of hypertension need

extensive study in both outdoor-indoor of different hospital and in community.

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