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Hypertension among Dubai Population, Prevalence and Patterns, Reflected in Dubai Household Health Survey 2014

Manal Omran Taryam[1], Waleed Al Faisal[2, *], Hamid Hussein[2], Eldaw Suliman[3], Tariq Al Janahi T.[4], Ali Al Salaq[4], Ahmed Wasfy[3]

[1]Primary Health Care Services Sector, Dubai Health Authority, Dubai, UAE
[2]Health Affairs Department, Primary Health Care Services Sector, Dubai Health Authority, Dubai, UAE
[3]Dubai Health Authority, Dubai, UAE
[4]Dubai Statistics Center, Dubai, UAE

Abstract

High Blood pressure affects more than a quarter of the global adult population. It is projected in year 2025 to increase by 24% in developed countries and 80% in developing countries. The increase is expected to be much higher than these projections. National surveys of prevalence, awareness, treatment, and control provide basis for assessing the burden of hypertension in the community. This study aims to determine prevalence of high blood pressure among different population segments of Dubai population and the patterns of distributions. Dubai Household Health Survey was conducted in 2014 as a Cross-sectional, multistage, stratified, Cluster survey. Houses were visited to obtain detailed information on the different health-related issues. High Blood pressure affects more than a quarter of the global adult population. It is projected in year 2025 to increase by 24% in developed countries and 80% in developing countries. The increase is expected to be much higher than these projections. National surveys of prevalence, awareness, treatment, Data were entered to the computer using Excel sheet and analyzed using SPSS 21. The study showed that about 2.5% of males, 2.8 of female, and 2.5% of the total in the age group 18-59 years are diagnosed as hypertensive. When combined with elderly, 3.2% of males, 5.1% of females and 3.5% of the total are diagnosed as hypertensive. When it comes to nationality, the study showed that about 18.9% of total Emirati have diagnosed as hypertensive, 20.0% of males and 18.0% of females. Almost one quarter of Dubai Emirati population have been diagnosed as having high blood pressure. One in each four individuals are hypertensive. This greatly puts them at risk of developing cardiovascular morbidity and mortality at long term. National screening, national registry, awareness, population-based interventions, policies and legislations are needed to be addressed as top priority.

Keywords

Hypertension, Prevalence and Patterns, Dubai Population

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1. Introduction

Hypertension affects more than a quarter of the global adult population. It is projected in year 2025 to increase by 24% in developed countries and 80% in developing countries. [1] The increase is expected to be much higher than these projections. [2] National surveys of prevalence, awareness, treatment, and control provide basis for assessing the burden of hypertension in the community. These surveys showed that many hypertensive were unaware of their disease, many of the aware

* Corresponding author
E-mail address: wldalfaisal@gmail.com (W. Al Faisal)

were not on treatment, and many of the treated are not controlled particularly in developing countries. [3-5]

The importance of high blood pressure as a major cause of common serious diseases has been recognized in most Western countries for ≈50 years. Before that, malignant hypertension was a frequent reason for hospital admission and a common cause of death. [6] Safe and effective antihypertensive drugs were first developed in the 1960s and were shown to dramatically improve the prognosis associated with malignant hypertension. [7, 8] Over the next few decades, the widespread use of an expanding armamentarium of blood pressure–lowering drugs to patients at risk of malignant hypertension effectively eradicated this condition from most developed countries. Subsequently, the provision of blood pressure–lowering treatments to a much broader group of patients at risk of serious cardiovascular diseases, such as stroke and coronary heart disease, among whom blood pressure levels were often only modestly elevated, contributed importantly to the declines in stroke and coronary disease deaths rates experienced by most Western populations. [9]

Cardiovascular diseases account for a large proportion of all deaths and disability worldwide. Global Burden of Disease Study reported that in 1990, there were 5.2 million deaths from cardiovascular diseases in economically developed countries and 9.1 million deaths from the same causes in developing countries. [10] However, whereas about one-quarter of all cardiovascular disease deaths occurred in persons who were less than 70 years of age in the developed world, more than about half of these deaths occurred in those less than 70 years in the developing world. [11]

2. Objectives

To determine prevalence of high blood pressure among different population segments of Dubai population and the patterns of distributions.

3. Methodology

Dubai Household Health Survey was conducted in 2014 as a Cross-sectional, multistage, stratified, Cluster survey. Houses were visited to obtain detailed information on the different health-related issues. According to Dubai Statistical Center [12] the total population of Dubai at the end of 2014 was 2327350 (males 1613175, females 714175) (UAE 212000, Expatriates 2115350). Individuals aged ≥18 years were investigated for the history hypertension. Related questions of the questionnaire were asked to 3716 persons. Data were entered to the computer using Excel sheet and analyzed using SPSS 21.

4. Results

The participants in the survey were asked the following question: "Have you ever been diagnosed with high blood pressure (hypertension)? The study showed that about 2.5% of males, 2.8 of female, and 2.5% of the total in the age group 18-59 years are diagnosed as hypertensive. When combined with elderly, 3.2% of males, 5.1% of females and 3.5% of the total are diagnosed as hypertensive. (Table 1)

Table 1. Distribution of hypertension among study population according to age and gender.

Hypertension	18-59 years		
	Male	Female	Total
	%	%	%
Yes, have hypertension	2.5	2.8	2.5
Do not have hypertension	83.8	90.6	84.7
Did not have diagnosis	13.7	6.7	12.7
Total	100.0	100.0	100.0
	Total		
Yes, have hypertension	3.2	5.1	3.5
Do not have hypertension	83.3	88.6	84.1
Did not have diagnosis	13.5	6.3	12.5
Total	100.0	100.0	100.0

When it comes to nationality, the study showed that about 18.9% of total Emirati have diagnosed as hypertensive, 20.0% of males and 18.0% of females. (Table 2 and Figure 1)

Table 2. Distribution of hypertension according to nationality and gender.

Hypertension	Emirati		
	Male	Female	Total
	%	%	%
Yes, have hypertension	20.0	18.0	18.9
Do not have hypertension	77.9	81.1	79.7
Did not have diagnosis	2.1	.8	1.4
Total	100.0	100.0	100.0
	Non-Emirati		
Yes, have hypertension	2.9	3.4	3.0
Do not have hypertension	83.4	89.7	84.2
Did not have diagnosis	13.6	6.9	12.8
Total	100.0	100.0	100.0
	Total		
Yes, have hypertension	3.2	5.1	3.5
Do not have hypertension	83.3	88.7	84.1
Did not have diagnosis	13.5	6.2	12.4
Total	100.0	100.0	100.0

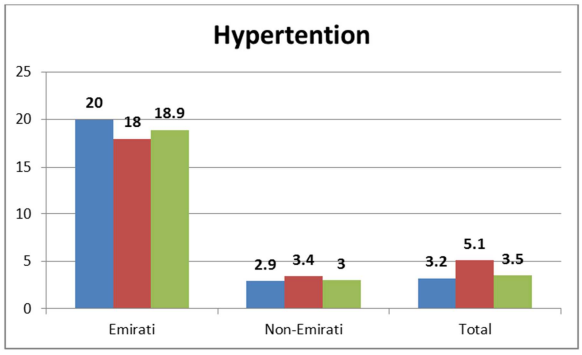

Figure 1. Distribution of hypertension among study population according to nationality and gender (Blue color for males and red color for females).

5. Discussion

The current survey revealed that almost one quarter of Dubai Emirati population have high blood pressure as they are either clinically diagnosed or currently on medication. This result is much less compared to other results showed by a study carried out in India using revised criteria (BP ≥ 140 and/or 90 mmHg). This review stated high prevalence of hypertension among urban adults: men 30%, women 33% in Jaipur (1995), men 44%, women 45% in Mumbai (1999), men 31%, women 36% in Thiruvananthapuram (2000), 14% in Chennai (2001), and men 36%, women 37% in Jaipur (2002). Among the rural populations, hypertension prevalence is men 24%, women 17% in Rajasthan (1994). Hypertension diagnosed by multiple examinations has been reported in 27% male and 28% female executives in Mumbai (2000) and 4.5% rural subjects in Haryana (1999). There is a strong correlation between changing lifestyle factors and increase in hypertension in India. [13]

The prevalence of high blood pressure as revealed by current study is similar to another study carried out in Saudi Arabia, which stated that the overall prevalence of hypertension was 25.5%. Only 44.7% of hypertensive were aware, 71.8% of them received pharmacotherapy, and only 37.0% were controlled. Awareness was significantly associated with gender, age, geographical location, occupation, and co morbidity. [14]

A similar pattern was reported from other developed and developing countries. This showed that the global burden of hypertension is considerable, and it appears to be increasing. It is a cause for concern for health and other concerned authorities. This requires an urgent intervention plan. This study showed the significant relation of hypertension with advancing age in both sexes in agreement with national and international studies in almost all populations with diverse geographical, cultural, and socioeconomic characteristics. [15-27]

6. Conclusion

Almost one quarter of Dubai Emirati population have been diagnosed as having high blood pressure. One in each four individuals are hypertensive. This greatly puts them at risk of developing cardiovascular morbidity and mortality at long term. National screening, national registry, awareness, population-based interventions, policies and legislations are needed to be addressed as top priority.

Conflict of Interest

The authors declare that they do not have any conflict of interest.

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