

An Overview on the Role of Family Physicians in Diagnosis and Management of Hypertension

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Abstract

Hypertension commonly known as blood pressure has become a critical disease in society. Many older people and those with obesity are suffering from this illness. There are risks factors linked to hypertension such as obesity, unhealthy diet, alcohol, and tobacco use and if the patient does not take proper the condition can result to immediate. Through the thorough investigation that was conducted on several articles, it proved that family physicians have become crucial experts in handling patients with hypertension. A Family Physicians provides personalized care and attention to a patient by providing the right diagnosis and treatment to the patient. The patient's condition improves with the help of the Family Physicians who ensure that the patient adheres to the proper living style and takes all the medication needed. The paper concludes by arguing that it is crucial for Family Physicians to adhere to guidelines established by WHO and that patients should be willing to comply with the new changes in their lifestyle that the physician recommends.

Keywords: Hypertension, Family physician, Diagnosis, Management

INTRODUCTION

Hypertension has been considered one of the leading factors to the high mortality rate globally and a significant contributor to the development of cardiovascular diseases, stroke, and increased rate of disability worldwide. It is estimated that hypertension leads to more than 9 million deaths annually. With hypertension risking all individuals across all age groups, among adults over 50 years it has been identified as the most risk factor for cardiovascular disease [1]. Hypertension occurrence has been estimated to be more than 1 billion people globally. Its prevalence in young people aged between 18-39years is estimated to be 7% and adults above 50 years to be 65%. Typically, hypertension is managed and diagnosed in an outpatient setting, and due to this; there is an importance of visiting a family physician. People with hypertension require consistent check-ups and observation to ensure its appropriately managed. Family physicians play a vital role in taking care of patients with this condition. It is a condition that people can prevent themselves from if they manage their blood pressure keenly. It is more associated with unstable high and low blood pressure in the body.

MATERIALS AND METHODS

For this study, the information needed to investigate the researchable topic was obtained from scholarly sources, namely, peer-reviewed articles and books. The primary reason these articles were used is that they contain extensive information that any reader can easily understand.

Moreover, selected papers were also used since they provided human experience in terms of understanding the topic, and the examples and explanations were based on the actual knowledge that the author experienced. Besides that, the reports generated all the content needed for this research. I obtained all the content required by searching for keywords such as a family physician, diagnosis, management, risk factors, prevention, and hypertension. Apart from using keywords or concepts, I also identified them for searching possible synonyms or related words. For instance, a family physician could also mean a family doctor or medical doctor. I also tried to combine different keywords, and this was helpful as I managed to obtain several articles and selected the most appropriate one for my chosen topic. Apart from searching for keywords, the articles used in this article were also obtained from search

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engines such as Google Scholar, which generated several articles used to investigate ideas. In addition to articles, two required textbooks were also used, and these books were obtained from the search engine Google books which contain many books, and some of those proved to be helpful in this research. To gather full content for the identified articles, extensive reading of the articles was done, comparing and contrasting data and summarizing to get the whole ideas of what the author is communicating.

Family Physician and their Role

A family physician is an individual who has been trained and educated in the family medicine discipline. They possess skills, attitudes, and knowledge that qualify them to continue providing comprehensive health care and preventive measures to patients irrespective of their gender, health, and age [2]. These physicians are not limited to a specific medical discipline, but instead, they are general to handle and extend medical care to patients at their homes. Due to their training and skills, family physicians are considered primary caregivers [3].

Family health care or sometimes referred to as family medicine is administered to family physicians. They are the most reliable individuals who can be contacted on health issues directly and all health matter needs. They are characterized by an ongoing personal patient relationship that focuses on integrated medical care. They are trained to provide general medical care to the patient and not only specific organs; they are specialized in optimal medical care. Family physicians in most cases are taken to manage chronic diseases like stroke, hypertension, asthma, diabetes, cancer, etc., and to prevent their degenerative conditions. Additionally, family physicians provide screening and counseling of patients on lifestyle issues to prevent diseases before they appear. They advise on what the patient should eat and how to conduct their daily routines to avoid contracting the disease. They educate patients and the patients' family members on health maintenance generally.

Conditions that Increase the Risk for Hypertension

Hypertension, also referred to as High Blood Pressure is contributed by several factors. Though these factors can be controlled, some like age and family history are uncontrollable, and taking preventive measures can only lower the risks by changing the controlled factors. Firstly, obesity has been considered the highest risk factor for the development of high blood pressure [4]. Obesity has excessive fats in your body resulting in being overweight. Too much fat in the body system adds stress to the heart while pumping blood and oxygen around the body. These fats contain cholesterol that blocks the easy flow of blood, and this can lead to hypertension [5]. Increased body weight correlates with increased high blood pressure due to increased cardiac output and peripheral resistance in the arteries. Also, physical inactivity increases the chances of

hypertension. Getting regular physical activities helps increase blood flow in the body, resulting in a healthy and strong heart and blood vessels. Physical exercises also burn out excessive fats in the body, reducing the risks of obesity which is a high contributor to hypertension [6]. Alcohol and tobacco consumption is another risk factor that leads to high blood pressure. Alcohol activates the adrenergic nervous system, which leads to constriction of blood vessels. Tobacco, on the other side, damages the heart and the blood vessels. Nicotine in tobacco raises the blood pressure and reduces the supply of oxygen that flows in the blood leading to high blood pressure [7].

Furthermore, hypertension can be traced down to family history and transmitted through genetics. Family members transmit genes from one generation to another. These genes play a role in some heart-related diseases and high blood pressure. Also, families with a history of high blood pressure share the same environments and other potential factors that can increase the risks [8]. Hypertension risks can increase tremendously if heredity factors are combined with unhealthy environments and lifestyles that contribute to high blood pressure. Moreover, age and sex contribute to the risks of suffering from high blood pressure [9]. As people grow old, there is an increase in heart rate. Blood pressure tends to rise with age. Research has also shown that women are more likely to experience high blood pressure as compared to men. Finally, stress is also a contributor to the increased risk of high blood pressure. Though stress is not a bad thing, too much stress may increase blood pressure [10]. Stress also leads to behaviors that may lead to blood pressure like alcoholism, poor eating habits, and tobacco abuse.

The Role of a Family Physician in the Diagnosis and Management of Hypertension

As previously stated, a family physician is an individual equipped with expertise and skills to manage typical complaints, identifying critical diseases, managing chronic and acute illnesses, and discovering hidden conditions. Hypertension is a chronic condition, and employing a family physician to deal with this condition for an ailing patient is crucial to help treat and manage the disease.

According to [11] one of the crucial roles that the family doctor first does is identifying patients or family members who are at risk for hypertension in the future. To identify such members in the family with the condition, the physician may request for family history of hypertension. From the history that the family gives if either of the parents or both; uncle or aunt has hypertension that without a doubt raises suspicion for greater risk [12]. Apart from digging into the family history and possible hypertension, the physician can also consider the family's sleeping habits. For instance, if one is sleeping for less than 6 hours a night, they might be experiencing the early symptoms of the condition. Also, high intake of stimulants such as caffeine and

excessive alcohol consumption are risk factors for hypertension [13]. For older patients with arthritis, the family physician may also take the step to monitor hypertension.

According to [14] after identifying possible hypertension, a family physician's crucial aim is to test the patient's blood pressure. According to [15] If the patient BP's rise with age could be diminished or prevented, any related hypertension diseases such as stroke, renal disease, and cardiovascular disease might be prevented. Therefore, the family physician has to conduct a series of tests of the patient's blood pressure to know what steps to undertake to hinder the possible higher risk of the disease [16]. The physician keeps track of the patient blood pressure, which enables her to save the patient from getting chronic diseases such as kidney disease, stroke, and myocardial infarction. A study conducted by [17] the authors states that despite the several challenges that FAMILY PHYSICIANS faces, they have made significant progress in screening and diagnosis of hypertension over the past two decades [18]. The Family Physicians may use different devices such as aneroid mercury and electronic to determine the blood pressure with semiautomatic devices that are reliable. The Family Physicians may take two blood pressure measurements, which must be recorded daily for a few days. According to [19] the screening of hypertension has been justified for various reasons, but in general, screening's primary goal is to differentiate between healthy individuals who might have the illness from the ones who do not. When conducting screening for patients with hypertension, the physician aims to identify sustained BP and the possible treatment that the patient should receive [20].

In addition to thoroughly checking the patient's blood pressure, the Family Physicians also provide patient education. The physician informs the patient on the importance of maintaining a healthy lifestyle and taking medication. That means it is not the full responsibility of the Family Physicians to take care of the hypertension patient; the patient has to take personal responsibility for his health [21]. In living a healthy lifestyle, the Family Physicians expects and advises the patient to avoid the risk factors such as consumption of harmful alcohol, high salt intake, physical inactivity, and tobacco consumption [22]. The physician encourages the patient to engage in physical activities such as cycling, swimming, running, and walking instead of sitting all day and not doing anything to help the body [23]. The physician can also suggest the physical activities that the patient can engage in and, at times, if the family is willing to motivate or participate in the patient's physical activity.

Thus, Family Physicians provide personalized care to the patient even when the family shows less support to the patient [24]. Family Physicians ensure that the patient does not forget his medication as a patient with hypertension

must undertake medicine within a specified time. Sometimes, they can ignore the time they are expected to take the medication for older patients.

Criticisms and Challenges that Family Physicians Face when Handling Hypertension Patients

Most of the family physicians have been harshly criticized for not adhering to clinical practice guidelines. Some have also been accused of failing to meet the treatment goals for patients with hypertension. In a study conducted by [2] Based on a field study conducted, the researcher concludes that only a few Family Physicians are aware of ISH or WHO guidelines, which means that most of them ignore such guidelines. In a survey the researchers conducted in Canada, they claim that the Family Physicians only use WHO guidelines once a month and some Family Physicians are concerned about the rigidity and the sources of the guidelines [25]. Some fear losing their sense of professionalism if they strictly follow the guidelines and practices for personalized care for a hypertension patient.

Additionally, Family Physicians have also complained about patients' non-compliance to lifestyle changes that Family Physicians advise them, thus becoming a barrier to such patients' BP regulation. Also, Family Physicians claim that lack of adequate information about the patient is a critical barrier while others complain of inaccessibility of drugs in clinics and other health care facilities [25]. Despite that, families still hire Family Physicians as they are better people to provide care for patients with hypertension. Every day, Family Physicians continue to address the challenges and overcome the critics they face to enable them to meet and provide the necessary patient care.

CONCLUSION

Hypertension is one of the most severe illnesses in the world that has caused the deaths of many. As explained in the report, hypertension's risk factors include diabetes, tobacco use, stress, older age, overweight, or obesity. Patients suffering from this illness require tender and constant care to live longer. For that reason, families decide to hire Family Physicians to assist in diagnosing and managing the disease. The Family Physicians, as explained, provide personalized care to the patient by first identifying the possibility of the disease through screening and, after that, helping the patient manages or lives with the condition. The Family Physicians advise the patient on the right and healthy lifestyle and ensures that the proper medication is what the patient is getting. The Family Physicians help the patient manage the condition by recommending the patient to engage in physical activities such as walking, running, and cycling.

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REFERENCES

1. Al-Ali KA, Al-Ghanim FA, Al-Furaih AM, Al-Otaibi N, Makboul G, El-Shazly MK. Awareness of hypertension guidelines among family physicians in primary health care. *Alex J Med*. 2013;49(1):81-7.
2. Almuqati AL, Alluqmani MS, Balhareth SH, Alosaimi MA, Alosaimi MM, Alzughaibi AM, et al. Evaluation of Role of Family Physicians in Management and Diagnosis of Hypertension in Primary Health Care Centers: A Simple Literature Review. *Int J Pharm Res Allied Sci*. 2020;9(1):105-9.
3. Anker D, Santos-Eggimann B, Santschi V, Del Giovane C, Wolfson C, Streit S, et al. Screening and treatment of hypertension in older adults: less is more?. *Public Health Rev*. 2018;39(1):1-6.
4. Armstrong C. JNC8 guidelines for the management of hypertension in adults. *Am Fam Physician*. 2014;90(7):503-4.
5. Bass MJ, McWhinney IR, Donner A. Do family physicians need medical assistants to detect and manage hypertension?. *Cana Med Assoc J*. 1986;134(11):1247.
6. Frank JE. Managing hypertension using combination therapy. *Am Fam Physician*. 2008;77(9):1279-86.
7. Gabb GM, Mangoni AA, Anderson CS, Cowley D, Dowden JS, Golledge J, et al. Guideline for the diagnosis and management of hypertension in adults—2016. *Med J Aust*. 2016;205(2):85-9.
8. Mancia G, Bombelli M, Seravalle G, Grassi G. Diagnosis and management of patients with white-coat and masked hypertension. *Nat Rev Cardiol*. 2011;8(12):686-93.
9. Mancia G. Resistant Hypertension: Epidemiology, Pathophysiology, Diagnosis and Treatment. Springer Science & Business Media; 2013.
10. Mikhail N, Golub MS, Tuck ML. Obesity and hypertension. *Prog Cardiovasc Dis*. 1999;42(1):39-58.
11. Petrella RJ, Merikle EP, Jones J. Prevalence, treatment, and control of hypertension in primary care: gaps, trends, and opportunities. *J Clin Hypertens*. 2007;9(1):28-35.
12. Pucci M. Diagnosis and management of hypertension in primary care. *Prescriber*. 2019;30(4):15-20.
13. Putnam W, Lawson B, Buhariwalla F, Goodfellow M, Goodine RA, Hall J, et al. Hypertension and type 2 diabetes: What family physicians can do to improve control of blood pressure—an observational study. *BMC Fam Pract*. 2011;12(1):1-11.
14. Rabi DM, McBrien KA, Sapir-Pichhadze R, Nakhla M, Ahmed SB, Dumanski SM, et al. Hypertension Canada's 2020 comprehensive guidelines for the prevention, diagnosis, risk assessment, and treatment of hypertension in adults and children. *Can J Cardiol*. 2020;36(5):596-624.
15. Phillips RL, Brungardt S, Lesko SE, Kittle N, Marker JE, Tuggey ML, et al. Hypertension: A Clinical Guide. CRC Press, 2014.
16. Rao G. Diagnosis, epidemiology, and management of hypertension in children. *Pediatrics*. 2016;138(2):e20153616.
17. Savoia C, Volpe M, Grassi G, Borghi C, Agabiti Rosei E, Touyz RM. Personalized medicine—a modern approach for the diagnosis and management of hypertension. *Clin Sci*. 2017;131(22):2671-85.
18. Schmidt BM, Durão S, Toews I, Bavuma CM, Meerpohl JJ, Kredt T. Screening strategies for hypertension: a systematic review protocol. *BMJ Open*. 2019;9(1):e025043.
19. Singh S, Shankar R, Singh GP. Prevalence and associated risk factors of hypertension: a cross-sectional study in urban Varanasi. *Int J Hypertens*. 2017;2017.
20. Siu AL. Screening for high blood pressure in adults: US Preventive Services Task Force recommendation statement. *Ann Intern Med*. 2015;163(10):778-86.
21. Sobngwi E, Mbanya JN, Unwin NC, Kengne AP, Fezeu L, Minkoulou EM, et al. Physical activity and its relationship with obesity, hypertension and diabetes in urban and rural Cameroon. *Int J Obes*. 2002;26(7):1009-16.
22. Tu K. Hypertension management by family physicians: Is it time to pat ourselves on the back?. *Can Fam Physician*. 2009;55(7):684-5.
23. Varon J, Marik PE. The diagnosis and management of hypertensive crises. *Chest*. 2000;118(1):214-27.
24. Woods D. Family physicians must counteract criticism says OMA president. *Can Med Assoc J*. 1980;123(9):931.
25. Niazi M, Yari F, Shakarami A. A Review of Medicinal Herbs in the Lamiaceae Family Used to Treat Arterial Hypertension. *Entomol Appl Sci Lett*. 2019;6(1):22-7.