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ADHERENCE TO LIFESTYLE MODIFICATIONS AND MEDICATION: KEY TO MANAGEMENT OF HIGH BLOOD PRESSURE

Syed Esam Mahmood

Editor in Chief, National Journal of Medical and Allied Sciences

Author for correspondence: *Dr. Syed Esam Mahmood, Email: semahmood@gmail.com*

Hypertension is becoming an important public health problem. A World Health Organisation report indicates that nearly 1.56 billion people will be hypertensive by 2025 worldwide. The prevalence of hypertension is even rapidly increasing and is one of the leading causes of death and disability in developing countries¹. 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. One-tenth of rural and one-fifth of urban Indian hypertensive population have their blood pressure (BP) under control². As per 2014 evidence based guideline for the management of high BP in adults by eighth Joint National Committee (JNC 8)³ a BP goal of less than 150/90 mm Hg among those aged 60 years and above and a BP goal of less than 140/90mm Hg among those aged below <60 years is recommended for the general population (having no diabetes and/or chronic kidney disease). For the individuals (all ages) having Diabetes and/or chronic kidney disease a BP goal of less than <140/90mmHg is recommended. A strong correlation has been reported between changing lifestyle factors and increase in hypertension in India⁴. Many risk factors have been identified for hypertension such as age, sedentary occupation, body mass index (BMI), ischemic heart disease, smoking and alcohol.

According to World Health Report (2002) excessive use of saturated fat, sugar and salt lead to high blood pressure⁵. While nothing can be done about age which is a non modifiable risk factor but certainly body mass index, waist circumference, waist hip ratio, physical inactivity, diet and mental stress can be modified. The elevation in blood pressure is one of the significant indicators towards the deteriorating health status of a population. Those individuals involved in physical activities show a lower incidence of hypertension. Therefore, the adoption of healthy lifestyles by all individuals is critical for the prevention of high blood pressure and an indispensable part of the management of those with hypertension. Lifestyle modifications may lead to decrease in blood pressure of an individual. Early detection of hypertension can be facilitated by periodic screening of the people regularly especially above the age of 30 years. Counseling of the hypertensives on lifestyle modification and its role in controlling hypertension should be emphasized. It is essential to identify individuals at high risk of developing hypertension. Making the physician aware of the need to advise lifestyle modifications to those with a high risk of developing hypertension will go a long way in preventing development of hypertension in them. The age old saying - "Prevention is better than cure" has a strong relevance in its context. The targeted strategy

should be directed at people who already have a high normal level of BP, have a family history of hypertension, are overweight, consume an excessive amount of salt or too little potassium, are physically inactive, or consume three or more alcoholic drinks per day. Public education is best achieved by means of simple, action oriented messages that build on the community's existing knowledge of the risks and value of treating hypertension. Such messages should be consistent with the many other health recommendations that are directed at the general population. Since tobacco use is one of the most prevalent risk factors among the world population and is associated with hypertension, tobacco use such as cigarette or beedi smoking and tobacco chewing should be quitted as soon as possible. Stopping tobacco use at any stage results in health benefits right away. It will reduce chances of having a heart attack or a stroke, cancer and lung disease. Diet should be improved. Fruits and vegetables protect blood vessels, heart and brain tissue. WHO recommends eating five servings of fruit and vegetables each day (400 grams). (One average-size banana, apple, orange, or mango would be a serving of fruit. Two tablespoons of cooked vegetables, or one big tomato would be a serving of vegetables. Use of salt and salty food should be avoided. Many preserved foods, like pickles and salt fish, contain a lot of salt. In addition, fast food, like french fries, often has a lot of added salt. One should try not to add salt to food. A good guideline is to use less than 1teaspoon (5 grams) of salt each day. Fibre use should be increased. Sources of fibre include beans, lentils, peas, oats, fruits, and vegetables. Use of at least two servings of oily fish a week should be encouraged. Fish oils contain "good" fats called omega-3 fatty acids, such as EPA (eicosapentanoic acid) and DHA (docosahexaenoic acid). They protect people from heart attacks and strokes by preventing blood clots. One serving of fish is about the size of a pack of playing cards. Fish oil supplements are also good. Alcohol use should be limited. Men should not drink more than two alcoholic drinks a day. Women should not drink more than one. One

drink, or unit, of alcohol, contains about 10 grams of alcohol. That is about one 250-ml bottle of beer, one 100-ml glass of wine, or one 25-ml glass of whisky. Use of fatty foods should be limited. All fats are high in energy and will make the individual gain weight unless he burns them off by staying active. Saturated fats are more likely to increase risk of heart attack and stroke. So, consumption of saturated fats should be restricted. Physical activity lowers the blood pressure, blood sugar, and blood fats. Thus the risk of heart attacks and strokes is reduced. It also increases oxygen levels in body, helps in losing weight and reduces stress. It strengthens heart, muscles and bones, improves blood circulation and tones muscles. Physical activity is any form of exercise or movement. It does not only mean sports and athletics. Daily chores such as walking, gardening, housework, and playing games with children are all forms of physical activity. Physical activity plays a big role in our health and well-being in all age groups. Small changes to routine, such as taking the stairs instead of the lift, or walking to work instead of driving should be encouraged. Above all, sitting in front of the television for too long should be avoided. WHO recommends 30 minutes of physical activity on most days of the week. This does not have to be all at once. It can be spread over the course of the day. For most people, the right kind of physical activity produces a light sweat and makes them slightly breathless. Once regular exercise gets started it should not be stopped as the fitness gained and all the benefits it brings are lost. Drugs to lower BP such as calcium channel blockers (CCB), diuretics, angiotensin converting enzyme inhibitors (ACEI), angiotensin receptor blockers (ARB), beta-blockers, etc. and to lower lipids (statins) must be prescribed along with life style changes⁶. In the general population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic or CCB as per the recommendation of JNC 8. If the goal BP is not reached within a month of treatment, increase the dose of the initial drug or add a second drug from one of the recommended drugs (thiazide-type

diuretic, CCB, ACEI, or ARB). The clinician should continue to assess BP and adjust the treatment regimen until goal BP is reached. IEC messages for all the hypertensive patients must include the additional information about the risk reduction methods; need to take regular and supervised treatment and monitoring of blood pressure. Health centres must upgrade its emergency care facilities to attend the patients round the clock with complications of hypertension or of associated diseases (stroke, coronary heart disease, etc.) The prevalence of hypertension will increase even further unless broad and effective preventive measures are implemented at this stage as India is a vast country with a heterogeneous and young population. Thus there is also a need for large, nationwide, multicentric, prospective, and supervised epidemiological studies to screen cases of hypertension as well as to explore the disease in the current scenario of our country.

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