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BLOOD PRESSURE AND DIABETES: SELF-MANAGEMENT AND LIFE ADJUSTMENT

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Abstract:-Blood pressure and diabetes are two major diseases which causing risks of mortality all over the world. More than 20% of the Indian population is affected by diabetes and 26% of the world population is suffering from blood pressure. It is noted that due to modern food habits and work conditions, there is increase in diabetes and blood pressure among people. The present paper described about diabetes and blood pressure and also suggested that there is need to perform physical exercise, yoga and meditation, so as to avoid these diseases.

Keywords:Blood Pressure , Life Adjustment , Self-Management , Hypertension and diabetes.

INTRODUCTION:

Hypertension and diabetes, two of the major global risks for mortality (WHO, 2010), are on a rapid rise in developing nations. In India, as per the 2011 estimates reported by the Indian Council of Medical Research–India Diabetes study, 62.4 and 77.2 million people have diabetes and prediabetes, respectively (Anjana, et al, 2011). It is predicted that by 2030, India's diabetes burden will be almost 87 million people (Shaw, et al, 2010). Additionally, there is an increasing prevalence of hypertension in the Indian population, especially in the urban areas (Gupta and Gupta, 2009). Elevated blood pressure (BP) has been linked to ischemic heart disease, peripheral vascular diseases, stroke, myocardial infarction, and renal failure. Hypertension and diabetes are important risk factors for cardiovascular disease. Given the increasing rates of coronary artery disease among Indians, especially at a younger age, understanding and successfully managing hypertension and diabetes may hold the key to reducing cardiovascular mortality in India. Diabetes and hypertension are also known to coexist in patients. The prevalence of hypertension is 1.5–2.0 times more in those with diabetes than in those without diabetes, whereas almost one-third of the patients with hypertension develop diabetes later. This coexistence presents an increased risk and can accelerate vascular complications (Joshi, et al, 2012).

India is the diabetes capital of the world with 41 million Indians having diabetes, every fifth diabetic in the world is an Indian. It also leads in prevalence of metabolic syndrome as well as obesity. 20 million Indians are either obese or abdominally obese with children being the prime targets and by 2025, the expected number is 68 million (Joshi, 2005).

DIABETES:

Diabetes Mellitus (DM), or simply diabetes, is a group of metabolic diseases in which a person has high blood sugar, either because the pancreas does not produce enough insulin, or because cells do not respond to the insulin that is produced. This high blood sugar produces the classical symptoms of polyuria (frequent urination), polydipsia (increased thirst) and polyhagia (increased hunger).

The strongest and most consistent risk factors for diabetes and insulin resistance among different populations are obesity and weight gain (Haffner, 1998): for each unit increase in body mass index, the risk of diabetes increases by 12 percent (Ford, et al, 1997). The distribution of fat around the trunk region, or central obesity, is also a strong risk factor for diabetes (Yajnik, 2001). Diabetes risk may be reduced by increasing physical activity. Conversely, a sedentary lifestyle and physical inactivity are associated with increased risks of developing diabetes (Hu, et al, 2003). Some studies report a positive relationship between dietary fat and diabetes, but specific types of fats and carbohydrates may be more important than total fat or carbohydrate intake. Polyunsaturated fats and long-chain omega-3 fatty acids found in fish oils (Adler, 1994) may reduce the risk of diabetes, and saturated fats and trans fatty acids may increase the risk of diabetes (Hu and Liu, 2001). Sugar-

sweetened beverages are associated with an increased risk of diabetes (Schulze, et al, 2004). High intakes of dietary fiber and of vegetables may reduce the risk of diabetes (Fung, et al, 2002; Stevens, et al, 2002).

Increased affluence and Westernization have been associated with an increase in the prevalence of diabetes in many indigenous populations and in developing economies (Rowley, et al, 1997; Williams, et al, 2001). Conversely, in developed countries, those in lower socioeconomic groups have a higher risk of obesity and consequently of type 2 diabetes (Everson, et al, 2002). Surrogates for socioeconomic status, such as level of education attained and income (Paeratakul, et al, 2002; Robbins, et al, 2001) are inversely associated with diabetes in high-income countries.

Blood Pressure (Hypertension):

Hypertension or high blood pressure is a chronic medical condition in which the blood pressure in the arteries is elevated. Blood pressure is summarized by two measurements, systolic and diastolic, which depend on whether the heart muscle is contracting (systole) or relaxed between beats (diastole) and equate to a maximum and minimum pressure, respectively. Normal blood pressure at rest is within the range of 100-140mmHg systolic (top reading) and 60-90mmHg diastolic (bottom reading). High blood pressure is said to be present if it is persistently at or above 140/90 mmHg.

Hypertension is just a medical term for elevated or high blood pressure. Hypertension does not mean that a person is overly tense or nervous. An elevated blood pressure increases the risk of strokes, heart failure, kidney failure, and heart attacks; if it is treated and controlled, complications that used to occur frequently can be prevented in a majority of cases. Unfortunately, in the India only about one third of all people with elevated blood pressure are treated effectively. In many parts of the world fewer than 10%-15% are under treatment. This is a major reason why people should become educated about this disease, what it can do, and how it can be treated.

Hypertension (HTN) is most likely the most common disease on Earth. Overall, 26.4 % of the world's adult population in 2000 had HTN and it is expected that by the year 2025, approximately 1 in 3 adults aged over 20 years will have the disease (Kearney, et al, 2005). It represents the single greatest preventable cause of death in humans and one of the most important modifiable risk factors for cardiovascular diseases (Grotto, et al, 2006). The direct positive relationship between blood pressure (BP) and cardiovascular risk was found to be strong, continuous, graded, consistent, independent, predictive, and etiologically significant for those with and without coronary heart disease. Among risk factors for HTN, stress, especially work stress, has drawn increasing attention (Yang, et al, 2006).

Given the rising prevalence of hypertension in developing countries undergoing epidemiological transition like India, increased awareness, treatment, and control of high blood pressure are critical to the reduction of cardiovascular disease risk and prevention of the associated burden of illness. Hypertension is responsible for 57% of stroke deaths and 24% of coronary heart disease deaths in India. Cardiovascular disease will be the largest cause of death and disability in India by 2020. Hypertension is emerging as a major health problem. The prevalence of hypertension has increased in urban communities as well as in rural people (Esam and Husain, 2012).

As discussed above, both Diabetes Mellitus and Hypertension are major non-communicable diseases which affect the human beings in early mortality or disability. The diagnosis and treatment for these diseases are continuous and gradual. Hence, there is need to prevent these diseases by adopting different self-management remedies.

CONCLUSION:

It is analyzed from the nature of blood pressure and diabetes and effects of these diseases; they are spreading slowly among the world community. There is need to prevent and control these diseases, so as to combat with the health ailments derived from these diseases. For this purpose, there is need to reduce the food that reduce fat and obesity, perform physical exercise, yoga, meditation, etc.

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