

Exploring the Benefits and Advancement in Nutrition and Hypertension in Covid-19 Pandemic

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Abstract

The world is currently suffering from the outbreak of a pandemic caused by the severe acute respiratory syndrome corona virus SARS-CoV-2 that causes the disease called COVID-19, the first reported in Wuhan, Hubei Province, China on 31 December 2019. As of 29 March 2020, there have been 732,153 confirmed cases of COVID-19, reported worldwide, with 34,686 deaths. The clinical and epidemiological feature of COVID-19 has been repeatedly published in the last few weeks. Interestingly, specific comorbidities associated with increased risk of infection and worst outcomes with the development of increased severity of lungs injury and mortality have been reported. The most common comorbidities in one report were hypertension (30%), diabetes (19%) and coronary heart disease (8%). Another report showed that the most frequent comorbidities in patients with COVID-19 who developed the acute respiratory distress syndrome were hypertension (27%), diabetes (19%) and cardiovascular disease (6%). The frequencies with which COVID-19 patients are hypertensive is not entirely surprising nor imply a causal relationship between hypertension and COVID-19 or its severity, since hypertension is exceeding frequently in elderly people and older people appear to be at risk of being infected with SARS-CoV-2 virus and of experiencing severe forms and complications of COVID-19.

It is unclear whether uncontrolled blood pressure is a risk factor for acquiring COVID-19 or whether controlled blood pressure among patients with hypertension is or not less than a risk factor. However, several organizations have already stressed the fact that blood pressure control remains an important consideration in order to reduce disease burden, even if it has no effects on susceptibility to the SARS-CoV-2 viral infection. Nevertheless, the fact that hypertension, and the other forms of cardiovascular disease also found frequently on COVID-19 patients are often treated with angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs), and the SARS-CoV-2 the virus causing COVID-19, bind to ACE-2 in the lung to enter cell.

It is well said that the prevalence of essential hypertension and coronary artery diseases increases with age and coronary diseases and hypertension frequently coexists in the same patients. In this way, the association between hypertension and COVID-19 mortality or severity could be explained in increased age and prevalence of cardiovascular diseases. Both are well known risk factor mortality in critical patients. Furthermore, it has been communicated that all those patients with cardiac injury had worse prognosis, suggesting that it could be specific target organ damage by SARS-CoV-2. This finding could explain why patients with prevalent cardiovascular disease are associated with worse hard COVID-19 outcomes.

For these reasons, we consider that in order to conclude that hypertension could be an independent predictor of COVID-19 mortality or severity; the model should be adjusted by cardiovascular diseases, to exclude its potential confounding effect. Hypertension is the most important risk factor for cardiovascular mostly and morbidity. The study was conducted to estimate the prevalence of hypertension among Indian adults. A national survey was conducted with fixed one day blood pressure measurement compare across 24 states and union territories of India. Hypertension was defined as systolic blood pressure ≥ 140 mm Hg or a diastolic blood pressure ≥ 90 mm Hg or on treatment for hypertension. The prevalence was age and gender standardization according to the 2011 census population of India. Blood pressure was recorded for 180,335 participants (33.2% women: mean age; 40.6 ± 14.9 years). Among them participants were of the age 18-74 years respectively. Overall prevalence of hypertension was 30.7% and the prevalence among women was 23.7%. Prevalence adjusted for 2011 census population and the WHO reference population was 29.7% and 32.8% respectively. At lastly, there is a high prevalence of hypertension with the almost one in every three Indian adults affected.

World Hypertension Day was initiated by the World Hypertension League in 2005 to raise awareness regarding high blood pressure and its complication. The day is celebrated on May 17 every year by countries across globe in an attempt to curb the 'silent killer' that has long been organized as one of the major risk factor for cardiovascular disease. According to World Health Organization, in 2015, raised blood pressure was responsible for 7.5 million deaths, about 12.8% of the total deaths globally. The hypertension epidemic in India is further complicated by the facts that a large portion of individuals is unaware of their hypertension. As a newspaper article published recently over 13 million individuals have been screened over the last one year. According to the report the in being carried out through 10,512 health and wellness centre (HWCs). The International Society of Hypertension in conjunction with World Hypertension League has been implementing the may measurement months- A global awareness campaign that aims to improve access to screening of blood pressure. Among the participants from India that were including in the final analysis, 31.8% were found to have raised blood pressure. Only 44% of the individual with hypertension were aware of their status prior to screening initiative.

Advancement in nutrition can be done by dietary modification are beneficial in the treatment of hypertension including reduction of sodium intake, moderation of alcohol, weight loss in the overweight or obese, and a diet rich in fruits, vegetables, legumes and low fat dairy products and low in snacks, sweets meats and saturated fats. One of the steps doctors may recommend to lower your blood pressure is to start using DASH diets. DASH stands for Dietary

Approaches to stop hypertension. The diet is simple eat more fruits, vegetables and low fat dairy products. Cut back on foods that is high in saturated fats, cholesterol and trans fats. Eat more whole-grains foods, fish, poultry and nuts. Limits sodium, sweets, sugary drinks and red meats. In research studies found that people who were on the DASH diet lowered their blood pressure within 2 weeks. Eating heart healthy diet is important for managing your blood pressure and reducing risk of heart attack, stroke.

By adopting the habits of reading food labels, you can choose your food wisely. Foods that have saturated fats or trans fat- factors that can raise cholesterol. Eating foods high in sodium can increase blood pressure.