International Journal of Medical Science and Clinical Invention 10(2): 6548-6552, 2023
DOI:10.18535/ijmsci/v10i2.02
https://valleyinternational.net/index.php/ijmsci

Research Article,

The Quintessential Amalgamation of Scientific Exercises and Right Diet-An Astonishing Lifestyle Medicine Antidote to Prevent Stroke

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Abstract:
Stroke is one of the key reasons for death and disability worldwide. Stroke prevention can start today, right now from this moment. Protect yourself and avoid stroke, regardless of your age or family history and you can do that by making right healthy lifestyle choices. Many strokes could be prevented through healthy lifestyle changes backed by scientific exercises and right diet alongside working with your health care team to control health conditions that raise your risk for stroke. We can't reverse the years or change your family history, but there are many other stroke risk factors that you can control through your lifestyle, provided that you're aware of them. If you know that a particular risk factor is sabotaging your health and predisposing you to a higher risk of stroke, you can take steps to alleviate the effects of that risk by working on your lifestyle backed by scientific exercises and right diet.

Keywords; family history, scientific exercises, sabotaging, risk of stroke and right diet

Introduction:

Stroke is defined as an abrupt neurological outburst caused by impaired perfusion through the blood vessels to the brain. It is important to understand the neurovascular anatomy to study the clinical manifestation of the stroke. Risk factors for hemorrhagic and ischemic stroke are similar, but there are some notable differences; there are also differences in risk factors among the etiologic categories of ischemic stroke. Hypertension is a particularly important risk factor for hemorrhagic stroke, though it contributes to atherosclerotic disease that can lead to ischemic stroke as well [1].Reducing the burden of stroke in the population requires identification of modifiable risk factors and demonstration of the efficacy of risk reduction efforts [2].Risk factors for intracerebral hemorrhage included hypertension, smoking, waist-to-hip ratio, diet, and heavy alcohol consumption. Considering the majority of strokes are first strokes within this study, these findings further illustrate the importance of primary prevention through the reduction of modifiable risk factors, particularly those that confer the greatest risk, to reduce the risk of a first stroke event [3]. The higher stroke risk among women at younger ages likely reflects risks related to pregnancy and the post-partum state, as well as other hormonal factors, such as use of hormonal contraceptives [4]. Genetic factors are also known to be non-modifiable risk factors for stroke with parental history and family history increasing the risk of stroke [5].Hypertension is the most important modifiable risk factor for stroke, with a strong, direct, linear, and continuous relationship between blood pressure and stroke risk [6].The incidence of stroke doubled in low-and-middle income countries over 1990–2016 but declined by 42% in high-income countries over the same period. According to the Global Burden of Disease Study (GBD), although the prevalence of stroke has decreased, the age of those affected, their sex and their geographic location mean that the socio-economic burden of stroke has increased over time [7].Women live longer than men, which are one reason for their higher incidence of stroke; another important concern is women's delay in

accepting help for ongoing symptoms [8].Homogeneity in stroke models to exhibit the broad spectrum of stroke pathophysiology associated with ischemic lesions or cortical or intracerebral damage is critical. Therefore, stroke animal models that target specific causes of stroke should be included. Latent interaction between comorbidities and stroke treatment should be identified to increase the safety and efficacy of the clinical outcome [9]. One of the other problems with the clinical trials for stroke is the lack of efficient data management. The impact of large data generated from numerous clinical experiments is over-whelming and there should be a standardized system to manage such data[10]. There is strong evidence to support a geographically defined (minimum fourbeds) unit in the hospital where patients with stroke are managed by a multidisciplinary team (minimum two physicians/doctors trained in stroke care, four nurses and a physiotherapist) with written standard protocol. Research is insisted to validate risk assessment tools across age sex, and regional groups; to evaluate whether any of the more recently identified risk factors add to the predictive accuracy of existing scales; and to determine whether the use of these scales improves primary stroke prevention [11]. All stroke and TIA patients must undergo a risk assessment for recurrent stroke and categorized accordingly by a physician trained in stroke care to initiate appropriate investigations and management strategies. However, secondary prevention should be addressed at all appropriate healthcare encounters on an ongoing basis following a stroke or transient ischemic attack [12].

Discussion:

Stroke in details

A stroke, or "brain attack," occurs when blood circulation to the brain fails. Brain cells can die from decreased blood flow and the resulting lack of oxygen. There are two broad categories of stroke: those caused by a blockage of blood flow and those caused by bleeding into the brain. A blockage of a blood vessel in the brain or neck, called an ischemic stroke, is the most frequent cause of stroke and is responsible for about 80 percent of strokes. These blockages stem from three conditions: the formation of a clot within a blood vessel of the brain or neck, called thrombosis; the movement of a clot from another part of the body such as the heart to the brain, called embolism; or a severe narrowing of an artery in or leading to the brain, called stenosis. Bleeding into the brain or the spaces surrounding the brain causes the second type of stroke, called hemorrhagic stroke [13].

Two key steps you can take will lower your risk of death or disability from stroke

Control stroke's risk factors through your lifestyle and know stroke's warning signs before it put you in to trouble.

Warning signs of a stroke

Warning signs are clues your body sends that your brain is not receiving enough oxygen.Sudden numbness or weakness of face, arm, or leg, especially on one side of the body. Sudden confusion, or trouble talking or understanding speech. Sudden trouble seeing in one or both eyes, sudden trouble walking, dizziness, or loss of balance or coordination, sudden severe headache with no known cause. Other danger signs that may occur include double vision, drowsiness, and nausea or vomiting. Sometimes the warning signs may last only a few moments and then disappear. These brief episodes, known as transient ischemic attacks or TIAs, are sometimes called "mini-strokes." Although brief, they identify an underlying serious condition that isn't going away without medical help. Unfortunately, since they clear up, many people ignore them [14].

Major risk factors of the strokes are, (i) high blood pressure, (ii) diabetes
(ii) Heart and blood vessel diseases

Conditions that can cause blood clots or other blockages include coronary heart disease, atrial fibrillation, heart valve -disease, and carotid artery disease. High LDL cholesterol levels, Smoking, Family history and genetic: Your risk of having a stroke is higher if a parent or other family member has had a stroke, particularly at a younger age. Certain genes affect your stroke risk, including those that determine your blood type [15].

People with blood type AB (which is not common) have a higher risk. Other medical conditions such as certain bleeding disorders, sleep apnea, kidney disease, migraine headaches, and sickle cell disease, blood-thinners or other medicines that can lead to bleeding, unhealthy lifestyle habits, including eating unhealthy foods,

not getting regular physical activity, drinking alcohol, getting too much sleep (more than9 hours), and using illegal drugs such as cocaine, overweight and obesity or carrying extra weight around your waist and stomach [16].

Role of right diet in the prevention of stroke

A Cochrane review in 2013 suggested that adherence to a healthy diet can decrease lifetime risk of stroke by nearly 20%. The Mediterranean, Dietary Approaches to Stop Hypertension (DASH), AHA, and US Department of Agriculture (USDA) food patterns diets are all alike in that they promote a combination of plant-derived micro and macronutrients, decreased caloric intake related to saturated and Trans fats, increased intake of fruits and vegetables, and decreased salt intake. An unhealthy diet can increase your chances of having a stroke because it may lead to an increase in your blood pressure and cholesterol levels. A low-fat, high-fibre diet is usually recommended, including plenty of fresh fruit and vegetables (5 A Day) and whole grains. Ensuring a balance in your diet is important. Do not eat too much of any single food, particularly foods high in salt and processed foods. You should limit the amount of salt you eat to no more than 6g (0.2oz) a day as too much salt will increase your blood pressure: 6g of salt is about 1 teaspoonful. The same foods that help us maintain a healthy weight and prevent diabetes and heart disease can also help prevent a stroke," says Dr. RaminZand, a vascular neurologist. That's because heart health and stroke are closely linked. Focusing on eating nutrient-rich foods that are good for your heart can help lower your stroke risk [17].

Role of scientific exercises in the prevention of stroke

It is now standard to report energy expenditure as metabolic equivalents (METs). Using this model, physical activity is classified as sedentary between 1-1.5 METs, light between 1.6 and 2.9 METs (e.g. playing an activity-promoting video game), moderate between 3–5.9 METs (e.g. ballet dancing), and vigorous when >6 MET (e.g. outdoor bicycling). Based on biological plausibility and evidence from pooled analysis from large prospective cohort and retrospective case-control studies, it is generally accepted that there is a lifetime-long inverse relationship between physical exercise and stroke. Compared to physically inactive individuals (<600 MET minutes/week) those who are highly active (>8,000 MET minutes/week, or around 2 hours of daily vigorous activity) are estimated to have a 25-30% lower risk of stroke. Combining a healthy diet with regular exercise is the best way to maintain a healthy weight. Regular exercise can also help lower your cholesterol and keep your blood pressure healthy [18]. For most people, at least 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic activity, such as cycling or fast walking, every week is recommended to stay away from stroke. If you're recovering from a stroke, you should discuss possible exercise plans with the members of your rehabilitation team. Regular exercise may not be possible in the first weeks or months after a stroke, but you should be able to begin exercising once your rehabilitation has progressed [19].

Eating seasonal fruits and vegetables can help lower the risk of a stroke as these are naturally low in fat and calories, but rich in fibre. Fruits and veggies also contain essential nutrients like potassium, fibre, folate, vitamin A and vitamin C. Potassium rich foods like white potatoes, bananas, tomatoes, prunes, melon and soybeans can help keep your blood pressure under normal range which is considered as one of the leading risk factors of stroke. Food high in magnesium such as spinach also helps minimize the risk of stroke. You should have at least two servings of fruits and include seasonal vegetables on a daily basis to cut the risk of a stroke and maintain a healthy weight [20].

Conclusion:

Stroke is the second leading cause of death and contributor to disability worldwide and has significant economic costs. Thus, more effective therapeutic interventions and prevention strategies are global health priorities. Stroke is the predominant cause of mortality due to neurological disorders in India and caused 6,99,000 deaths in 2019, which was 7.4 per cent of the total deaths in the country, a study published in Lancet Global Health has said. Stroke ranks as the fourth leading killer in the United States. A stroke can be devastating to individuals and their families, robbing them of their independence. It is the most common cause of adult disability. Each year approximately

795,000 Americans have a stroke, with about 160,000 dying from stroke-related causes. Officials at the National Institute of Neurological Disorders and Stroke (NINDS) are committed to reducing that burden through biomedical research blended with lifestyle changes. If you choose a well-balanced healthy diet, placing emphasis on natural, whole, and unprocessed foods, and if you exercise regularly and keep all your risk factors under control, you can protect yourself from stroke and lead a disability free independent life.

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