

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors/Readers,

Hope you all are well. Christmas season is coming and so is the winter. We must remain careful about our health. The incidences of dengue have been still continuing. We should take precautionary measures about it as well. At the same time, from China and some other parts of the world, report of spreading of Covid 19 is coming. In China, many people are displeased with government's imposition of Covid 19 restrictions. In India, there are regular reports of Covid 19 incidence. So, we should remain very careful and cautious about our health.



In this issue, we are going to discuss Peripheral Arterial Disease (PAD). It is recognized as an important cause of cardiovascular morbidity that affects more than 23 crore people worldwide (Circulation Research, 19th June 2021). Traditional cardiovascular risk factors, including advanced age, smoking, and diabetes, are strongly linked to an increased risk of PAD and has been underappreciated in compared to coronary artery diseases and stroke. Greater attention to PAD in recent years has led to important new epidemiological insights in the areas of thrombosis, inflammation, and microvascular diseases.

Peripheral Arterial Disease (PAD)

Peripheral artery disease, sometimes called peripheral arterial disease, is a condition in which human arteries are narrowed and cannot carry as much blood to the outer parts of the body, like our bodies, arms, and legs. It's a form of peripheral vascular disease. Cramps that start when you are moving and go away with rest is one of the warning signs of PAD. One will usually feel it in her legs but it can be in other parts of the body too. One can get PAD in his/her arms, head, stomach, and kidneys.

What is cholesterol?

It is well known that cholesterol is a waxy fat-like substance made in the liver. It is found in all cells in the human body. We also get cholesterol, although to a small extent, from food. A plant cannot produce it and is only found in animal products like meat and dairy products. The human body needs a small amount of cholesterol because it makes hormones, vitamin D, and other substances that help us in digestion. The human body makes all cholesterol it needs but cholesterol is neither all good nor all bad. It is a topic that needs deeper knowledge.

In the next section, i.e., story one we will discuss PAD in details and story two will also touch upon the clue to prevent overeating and obesity.

Wish you a Merry Christmas and Happy New Year!

With thanks

Sanjib Acharya

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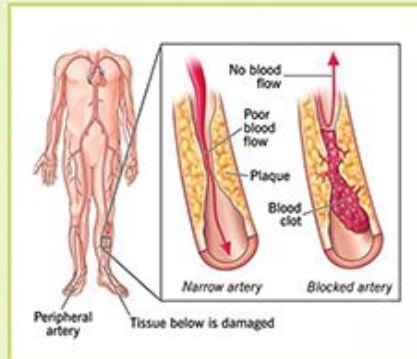
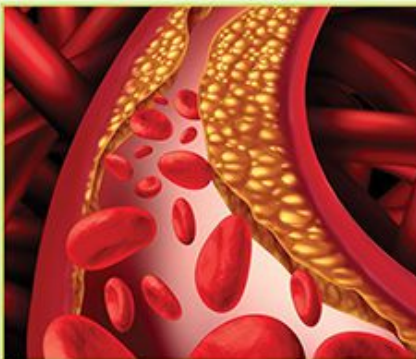


What causes PAD?

PAD in most cases causes due to a blockage in the arteries. Arteries carry blood away from the heart. This situation is atherosclerosis. It happens when things in our bloodstream like fat and cholesterol form plaques that build up in our arteries. It is known that people above the age of 40 years have a greater risk of PAD. And risk increases with age. But some studies also found no such age-specific risk. It is also found that older men have more risk of PAD than women.

About affected people

More than 20 crore people worldwide suffer from PAD but about two-thirds of them are unrecognized and undertreated. It is also known that the rate for Africans-Americans is about twice that of non-Hispanic whites at any given age. The most common location for PAD is the leg or arms, usually, the legs do not receive enough blood flow to keep up with demand. The most common risk factors are smoking, hypertension, and diabetes. A person with PAD is at higher risk of being affected by CAD (coronary artery disease) if also has diabetes or hypertension.



Symptoms of PAD

When there is no atherosclerosis then one has to look for infection or inflammation of a blood vessel, injury in arms or legs, irregular shape of your muscles or ligaments, and exposure to radiation. A study observed that there are several risk factors for having PAD. If one has heart disease have a 1 in 3 chance of having PAD this is the most important matter that needs to have cared for. Others include Age (older than 30), diabetes, high cholesterol, high blood pressure, obesity, not being active, having sedentary life, and smoking. Smoking is known to be the single biggest PAD risk factor that is in one's control. It raises one's risk for PAD by 400% compared to non-smokers.

When should one go to the doctor?

In many cases patients, having PAD is unaware of it. A person above 40 years or one aged below 50 years can consult doctors if 1) he/she has a family history of PAD, heart attack, or stroke. 2) high blood sugar, 3) high cholesterol, 4) past or continuing smoking habits, 5) African American origin, and 6) obesity.

The common treatment

Common treatments include an angiogram, Ankle-brachial index, blood test, and ultrasound. If PAD is found doctors generally prescribe a change in lifestyle or new medicine, or if the case is advanced then go for surgery.

High protein breakfast helps prevent overeating and obesity

Recent research observes that breakfast with sufficient protein can help prevent overeating for the rest of the day. Obesity due to overeating has been a growing problem not only for the people of rich countries but also a problem for most countries. A report published in Healthline (November 28, 2022) is very timely to deal with the problem.

The main findings

Our bodies try to hit protein targets during the day. So, eating a high-protein breakfast may help one to eat less throughout the day. Much of the food one eats today is processed and refined and hence low in protein. Our bodies compensate for this by eating excess food throughout the day to meet our energy needs.

Research methodology

The researchers were Australians. They analysed the food intake, nutrition, and physical activity of 9,341 adults in Australia from May 2011 until June 2012. The Median age of the participants was about 46 years. Their average daily intake consisted of 18% protein, 43% carbohydrates, 31% fat, 2% fibre, and 4% alcohol.



Observation of the research

They observed that participants who consumed low amounts of protein in their first meal of the day increased their food intake for the remainder of their meals. But those who consumed the recommended amount of protein in their first meal of the day did not increase their food intake throughout the day. It was also noted that the participants with a low protein first meal ate more energy-dense food like saturated fats, sugar, and salt during the day. They also ate less than five food groups including grains, vegetables, fruit, and dairy/meats.

Need of protein

It is known that protein is our body's building block in cells and is used to repair and make new cells. It is estimated that more than one million forms of protein are needed to allow the human body to function.

CASE PRESENTATION by Dr. Chirasri Goswami (MBBS, MD) Consultant Histopathologist

CASE PROFILE: A 37 years old lady from Agartala presented with a nasopharyngeal growth.

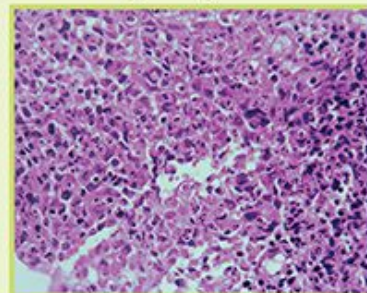
DIAGNOSIS: NASOPHARYNGEAL CARCINOMA (Non keratinising Undifferentiated Type).

INCIDENCE: It is a rare tumor with a worldwide incidence of less than 1 case per lakh population, however in China it is a common tumor.

MICROSCOPIC FINDINGS: The tumor showed sheets of malignant cells with ill defined cell margins closely intermingled with histiocytes, lymphocytes, plasma cells & polymorphs. Many of the cells are spindly.

IMMUNOHISTOCHEMISTRY: Confirms diagnosis with presence of CK 5/6, CK8, CK 13 & CK 18 positivity, and LCA negativity.

MOLECULAR GENETICS: Genetic susceptibility is high and is related to certain HLA subtypes & specific genetic instabilities. It has a strong association with EBV.



PROGNOSIS: 5 year survival rate is 65%.

CSR Activities & Events of SERUM throughout November 2022

Annual General Meeting



Nov 27: Paschim Burdwan



Nov 26: West Medinipur



Nov 26: Howrah & Hooghly



Nov 20: Kolkata



Nov 20: South 24Pgs



Nov 26: Free Doctors Clinic



Nov 24: Health check-up and Thalassemia Carrier detection camp at Gokhale Memorial Girls' College



Nov 14: Free Diabetes Test conducted at 5 Metro Stations on World Diabetes Day



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