SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Readers/Doctors,

Hope everything is going well with you. It is said that the intensity of heat in the summer may be very high. On the other hand, the forecast for the advance monsoon is also there. But we have to remain alert for anything.

Recently, a new global health concern of hantavirus in blood samples has been identified in multiple research studies. This is not new. It was as early as 2008. The health department of Kerala is known to have been aware of the fact that hantavirus (the scientific name being Ortho hantavirus) could be the new emerging health anxiety in the state.

How does hantavirus clinically present?
Reports say that the clinical symptoms of both leptospirosis and hantavirus-induced HFRS- high-grade fever, myalgia, lower platelet count, acute kidney injury and haemorrhagic manifestations- are so similar that these often cannot be distinguished without targeted serological tests. The patients deteriorate and die within four to five days. It is reported that India's Institute of Advanced Virology has been busy diagnosing this virus by acquiring PCR testing. But be sure that no one needs to be panicked by this virus news as it has yet to spread. The cases may be coming from outside and are limited to a few places and persons.

Another health emergency has been the epidemic of Ebola disease, which is caused by the Bundibugyo virus. This is found in the Democratic Republic of the Congo and Uganda in Africa. WHO has considered it a health emergency of international concern. But it has not yet started spreading around the world. So, Indians should not be concerned about this also as of now. In the coming monsoon, you must be very careful about cleanliness and the quality of food items. This season is more problematic for elderly people. So be conscious and stay safe.

In this issue, we have chosen two stories. Story 1 discusses Muscle Atrophy. Why muscles tissues become weak, and how can we determine the health problem and how to treat this disease, etc., in detail? It is known that in India, up to 71% of adults suffer from poor muscle mass. Some cases can be treated, but some cases, particularly those related to neurology, are not easy to treat fully. Story 2 touches upon new and revealing research. The study observes that there has been a correlation between anaemia and rising chances of Alzheimer's as the ageing advances. So, read the stories carefully.

With good wishes to you.

Sanjib Acharya

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Muscle Atrophy - some types of this can be reversed, but not all

Story 1

Muscle atrophy is the wasting or thinning of muscle tissue. It happens due to the disuse of your muscles or neurogenic conditions. It may occur due to malnutrition, age, genetics, or a lack of physical activity. It may also occur due to certain medical conditions. Disuse atrophy occurs when one does not use his/her muscles enough. Another type of atrophy, neurogenic atrophy, occurs due to nerve problems or diseases.

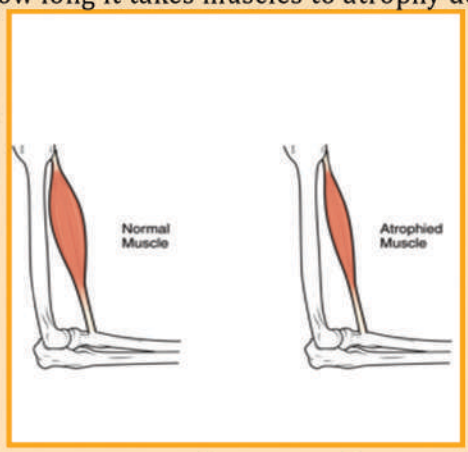
How to identify atrophy?

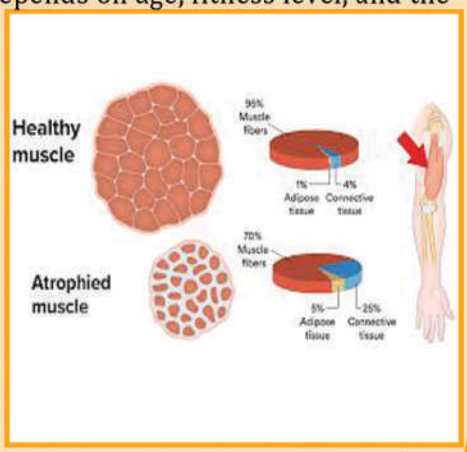
Symptoms differ depending on the causes of the condition. The foremost symptom has been reduced muscle mass. One arm or leg is smaller than the other, weakness in one arm and or one leg. Also, one can see numbness or tingling in the arms or legs. There may be trouble walking or balancing. Difficulty in swallowing or speaking is also a symptom. Moreover, facial weakness and gradual memory loss are also signs of atrophy.

Why does atrophy start?

Stopping the use of muscle and non-waste of energy needs to be taken care of, then the body will start to break down one's muscle. This causes them to decrease in size and strength. So, one has to avoid a sedentary lifestyle, malnutrition, and continuous work by sitting all day. Do regular exercise. This can also happen if there is a genetic disorder or unable to move limbs after a stroke or other diseases. Atrophy can also be an age-related matter.

There may be neurogenic atrophy, which is caused by an injury or disease affecting nerves. Damaged nerves trigger the muscle contractions that are needed to stimulate muscle activity. If a muscle does not contract, the body thinks that it is not needed to do so, and the body starts breaking it down, causing a decrease in size and strength. But how long it takes muscles to atrophy depends on age, fitness level, and the





cause of atrophy. In case of disuse, it may start within two to three weeks. But neurogenic muscle atrophy may start sooner, depending on one's health.

Diagnosis and tests

These include blood tests, muscle or nerve biopsy, electromyography, or EMG. Also, there are nerve conduction studies, X-rays, CT scans, and MRIs.

Treatments

It depends upon the degree of muscle loss and underlying medical conditions. First, physical therapy includes preventing immobility, increasing muscle strength, improving circulation, and reducing spasticity. Secondly, there is functional electric stimulation to stimulate the muscles. Thirdly, it is focused ultrasound therapy by delivering beams of ultrasound energy to specific areas in the body. Fourth, one has surgery to improve muscle function.

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Patients with anaemia have a greater risk for dementia over time - a recent study observes

Story 2

A recent study has observed that anaemia has been related to dementia risk. Dementia is the loss of thinking, remembering and reasoning skills. This is not a normal part of aging. Globally, about 10 million new cases are diagnosed every year. It has now been spreading rapidly to low- and middle-income countries. In India alone, about 5.5 million elderly people suffer from dementia.

About anaemia

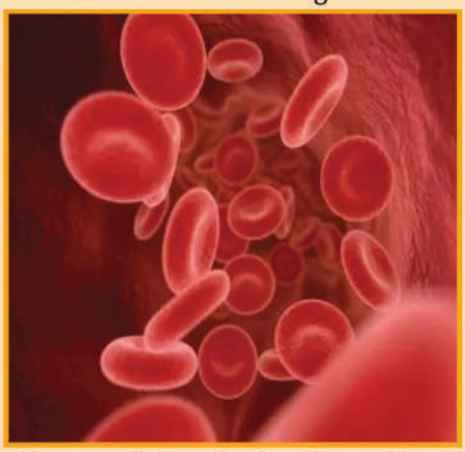
Anaemia is a blood condition that occurs when one does not have enough healthy red blood cells. These cells are also known as haemoglobin. Red blood cells carry sufficient oxygen to the body's tissues. A person with anaemia often feels tired, weak, or short of breath. The immediate causes of anaemia have been iron deficiency, vitamin B12 deficiency, or some chronic diseases like kidney, cancer or rheumatoid arthritis.

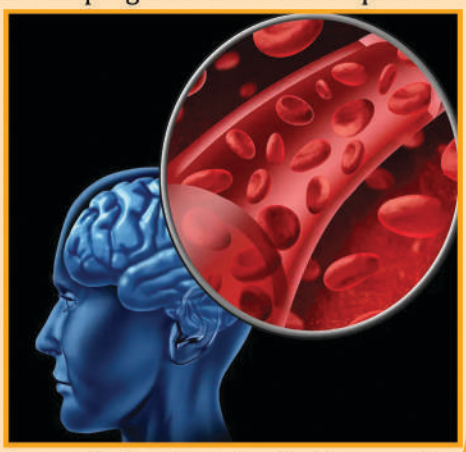
The new study and its methodology

The researchers used information from the Swedish National Study on Aging and Care in Kungsholmen. The participants were all at least 60 years old and did not have dementia as a baseline. Researchers analysed data from 2,282 participants. Researchers looked at a number of blood biomarkers of Alzheimer's. They looked at blood haemoglobin levels and saw if they were below a certain level. Among the participants, 8.7% had baseline anaemia. These participants were more likely to be male, have chronic diseases, have a lower education level and be older. Participants with anaemia had higher levels of Alzheimer's disease biomarkers. They were 16 years of follow-up, and the average follow-up time was 9.3 years. Throughout the follow up 15.9% of participants developed dementia.

The result of the study

The researchers found that anaemia was associated with a higher risk of developing dementia. Participants





with anaemia had a 66% higher chance of developing dementia than participants who had normal haemoglobin levels.

Some important questions on the research

Do men and women have different risks? According to the researchers, the relationship between haemoglobin and higher dementia risk plateaus when the haemoglobin level reaches a certain level. But for men, the risk is more than for women. The risk of dementia increased as levels of Alzheimer's disease biomarkers increased and haemoglobin levels decreased. In contrast, participants who had low levels of the biomarkers and normal haemoglobin had the lowest risk of dementia.

Conclusion

Courtney Kloske, Director, Scientific Engagement for Alzheimer's Association, reportedly said (Medical News Today, 22 April) that while previous research had linked anaemia to an increased risk of dementia, the study added new insight by examining that relationship with Alzheimer's-related bold biomarkers.

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CSR Activities & Events of SERUM throughout May, 2026

May 2: Meet the Press at Press Club Kolkata

May 8: Blood Donation Camp

May 9: Jeevan Devata Samman 2026

May 10: Sanjib Acharya at All Bengal Sit & Draw organised by Sampratik North

May 14: Thalassemia Awareness Camp & Carrier Testing at Galaxy Multispeciality Hospital

May 16: Thalassemia Awareness Camp & Carrier Testing at Madurdaha Satyavritti Vidyalaya

May 17: Sanjib Acharya at Blood Donation Camp organised by Madhya Kolkata Jagadhatri Puja Committee

May 17: Sanjib Acharya at the "Kobi Pronam" programme organised by Sampratik North as a Special Guest

May 26: Sanjib Acharya at the 127th birth anniversary celebration of Kazi Nazrul Islam at Phanibhusan Bidyavinode Yatra Mancha

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