

# SERUM TIMES

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SERUM MEDICAL BULLETIN

## From the desk of the Editor-in-Chief

Dear Doctors/Readers,

We hope you all are well. Since last month we are again anxious about the spreading Covid19. As of now Covid19 infection is not at all alarming and fatality is negligible. But in some countries like China and South Korea the infection is very high. The government of India is very watchful about any spread of any variant of Covid. Any person from five countries, China, Hong Kong, Japan, South Korea, Singapore, and Thailand will have to be Covid negative report to enter India. But we feel we have nothing to worry about any sort of Covid 19 infection as of now. But let us be cautious about our health and stay safe.



In this issue, we are going to discuss a rare type of disorder amyloidosis in the human body known as AA amyloidosis or secondary amyloidosis. AA amyloidosis can damage several human organs including kidneys, liver, spleen, stomach, and intestine. It sometimes damages the heart also. But this disorder affects kidneys in most cases. What is the nature of the disorder? This disorder occurs when proteins in the human body mutate, changing form and gathering on one's organs and tissues. That means when proteins lose their three-dimensional structure and become twisted clumps of misshapen fibrils (amyloid deposits) that gather on one's organs and tissues.

Why does it happen? It happens because a person has a chronic inflammatory condition or disease. The treatment of this disorder relates to controlling an underlying disease or condition. That is the doctors have to treat the root cause behind the disorder.

It is mainly an age-related issue. Most people diagnosed with this disorder are between the ages of 60 and 70 years. At the same time, men are mostly affected by this disorder. Almost two-thirds of the persons affected by this are men. The population affected by this is very limited. The information shows that the incidence of amyloidosis is approximately 1.2 per one lakh persons per year worldwide. Actually, there is no way to prevent this disorder. But some experts think that a judicious intake of salt can be a way to prevent amyloidosis.

The next story will discuss more on this matter. Again we like to raise the issue that has been mentioned at the outset of our editorial, that is, be cautious about infectious diseases including Covid 19.

With best wishes of the year,  
Thank you

Sanjib Acharya

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## Amyloidosis - a rare but deadly disease

Amyloidosis is a disease in which insoluble amyloid proteins are deposited in the body's organs. This causes abnormal protein build-up in tissues. In other words, it is a disorder of protein conformation and metabolism in which insoluble fibrils are deposited in body organs. This led to organ dysfunction and may also lead to eventual death.

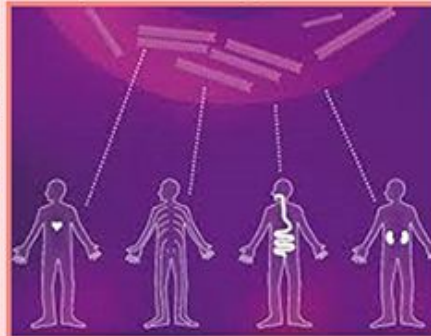
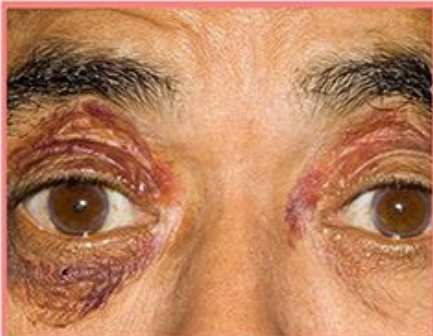
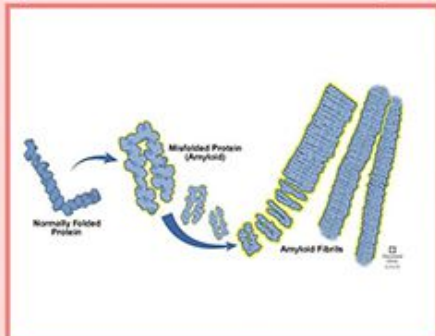
### Why does amyloidosis arise?

Actually, there is no certain cause. The disease arises due to protein misfolding. It may arise from hereditary genetic changes that cause the body to make abnormal proteins. Abnormal or misfolded protein deposition affects the function of human organs. When disorder starts, they seem to continue building up in the same location.

### Symptoms of AA amyloidosis

This affects mostly the kidneys and also the liver, spleen, and stomach. Some common symptoms and conditions are as follow: Firstly, swollen feet or legs showing kidney problems. Secondly, there will be foamy or frothy pee. Peeing is generally less than usual. Thirdly, chronic diarrhoea leads to enlarged kidneys and liver. Fourthly, the presence of low blood pressure nausea, and vomiting.

It is relatively a rare disease. Only 1,275 to 3,200 new cases are diagnosed in the USA annually (Baker and Rice in DeBakey, a cardiovascular journal). Men above 60 years are at greater risk.



Actually, the disease affects the antibody-producing plasma cells in the blood, persons with chronic infectious or inflammatory diseases, such as tuberculosis, rheumatoid arthritis, and familial Mediterranean fever, are also prone to the disorder. Persons with long-term dialysis and inherited genetic changes that affect proteins in the body are also prone to it.

### How to detect it?

Some biopsies are done to detect it. First, a "Fat pad" biopsy is done by taking a small sample of abdominal fat just under your skin. Secondly, a small sample of tissue from the affected organ. There are some other tests to diagnose this disorder.

The treatment of AA amyloidosis includes treatment of the underlying cause of the disease. The use of medicine to reduce the inflammatory conditions in the body organ that had caused AA amyloidosis is the main treatment. It is said that like many illnesses the key to managing AA amyloidosis is to diagnose and treat it early.

## Haemoglobin deficiency in men - a great cause for concern

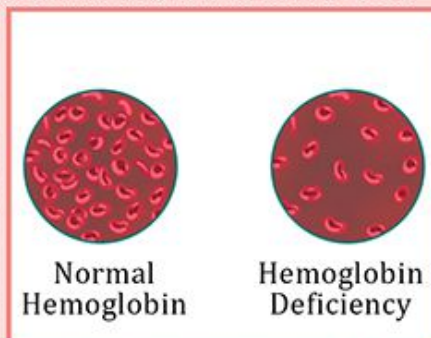
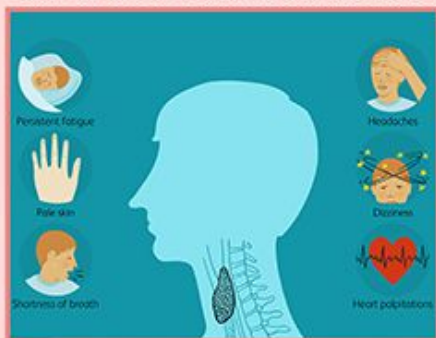
Haemoglobin deficiency has generally been thought of as a problem for women. Most of the studies around the world are known to have concentrated, mainly, on the problem of women. About 1.9 billion people (including men and women) globally or 27% of the population had anaemia in 2013. So, it is a major health issue, particularly in low- and middle-income countries where 93% of the total anaemic population lives. In India, 23.2% of men suffered from moderate to severe haemoglobin deficiency or anaemia, according to a study in 2019 (the Lancet Global Health, 1 December 2019). But the prevalence of anaemia varies among states and districts depending on socio-demographic characteristics.

### Measure of haemoglobin deficiency or anaemia

Haemoglobin deficiency is a condition in which blood lacks adequate healthy red blood cells (RBC). The RBCs carry oxygen to the body's tissues. Without enough iron, our bodies cannot produce enough of a substance in RBC that enables them to carry oxygen. Assessment of severity of anaemia in men is categorised as - if one's haemoglobin concentration is lower than 13gm per decilitre, moderate or if it is lower than 11gm/dl, it is lower and when it is lower than 8gm/dl, it is severe.

### Method of analysis and some findings

On a sample of 1,06,298 men the prevalence of anaemia of any sort was found to be 23.2% and out of this moderate or severe anaemia had been 5.1%. In the case of women, it was found to be



53.2% (of any sort of anaemia). At the state level, it varies widely from 9.2% in Manipur to 32.9% in Bihar. Some of the factors of this variation have been less household wealth, lower education, living in a rural area, smoking, consuming smokeless tobacco and lower physical weight. But an exception was also noted. At the district level, the prevalence of anaemia among men correlated strongly with that among women.

### A recent study

A report on the basis of the fifth National Health Survey data pointed out (The Hindu, 11th December) that three out of ten men (aged 15-54 years) in rural India are anaemic. Anaemia is more prevalent in rural areas than in urban areas. One in five urban men is anaemic and three out of every ten rural area men are anaemic.

Experts are not sure about the causes of anaemia in men. Iron deficiency can be one reason. Vitamin B deficiency may be another cause. But everything is not known to the experts. So the government has to address the problem of anaemia in men as it addressed it in women.

## The CSR Activity of SERUM throughout December, 2022



Dec 4: AIDS & Thalassemia Awareness Rally from Shyambazar & Blood Donation Camp at Serum Auditorium

### Annual General Meeting, 2022 - 23



Dec 3: Nadia & North 24pgs



Dec 11: Hooghly



Dec 17: South Bihar



Dec 18: North Bengal



Dec 24: Nadia Murshidabad District



Dec 24: Burdwan Rural & Birbhumi



Dec 24: Burdwan



Dec 31: Cuttack, Odisha



Dec 10: Shri Sanjib Acharya at the open forum organised by International Human Rights Bureau at Kamarhati



Dec 10: Sri Sanjib Acharya at the Mohit Mancha, Tala Park



Dec 19: Sri Sanjib Acharya in Qatar, watching the Final match of World Cup Football, Argentina vs. France at the Lusail Stadium



Dec 30: Pays respectful homage to Sri Tapan Banerjee at Serum Auditorium



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