

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors/Readers,

Hope you are safe in the ongoing pandemic phase. I suggest you to take COVID 19 vaccines, as soon as possible, if any of you have not been able to take it. A huge number of scientists concerned with the pandemic related matters, believes that almost complete vaccination of the people of any country has been the only way to fight COVID 19. Of course different variants of the virus have been creating new anxiety about the intensity and spread of the pandemic. These are known as new waves of the COVID 19 virus. But a widely covered vaccination is believed to be the only and surest way to challenge the dreadful virus.



We all know that in spite of being one of the biggest producers of vaccines of the world, India has been lagging much behind not only amongst the developed countries of the world but far behind many of the developing countries also. Many observers think that lack of political will is the main reason behind the slow vaccination of the people in India.

In this issue we are going to discuss an important clinical matter that sometimes endangers the life of a person if that is not present by required amount in all cells. This is known as Glucose-6-Phosphate Dehydrogenase or G6PD. Can a person with G6PD take Covid 19 vaccines? Doctors say that there is no bar to take COVID vaccine for G6PD deficient patients.

What is G6PD?

It is an enzyme found in the cytoplasm of all cells in the body. It is a housekeeping enzyme that plays a vital role in the prevention of cellular damage from reactive oxygen species (ROS). It does this by providing substrates to prevent damages.

The deficiency of G6PD is the most common human enzyme defects known. About 40 crore people worldwide have been affected by this. Men, and not women, are more commonly affected by this. This is because it is a hereditary matter and it is linked with X chromosome linked inheritance. It is most prevalent in tropical and sub-tropical regions. The deficiency of G6PD is more common among the African, Mediterranean or Asian descent.

With this general introduction I would like to request you to know more from the next story which is more detailed and informative on this matter.

Happy and safe lives and livelihood in the ongoing deadly days!

With best wishes,

Sanjib Acharya

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Important facts on G6PD

The common indicators of G6PD deficiency among the babies are paleness, yellowing of the skin and whitening of the eyes (jaundice), dark urine, fatigue, shortness of breath, enlarged spleen and a rapid heart rate. People with severe deficiency may have skin ulcers.

How to deal with G6PD deficiency?

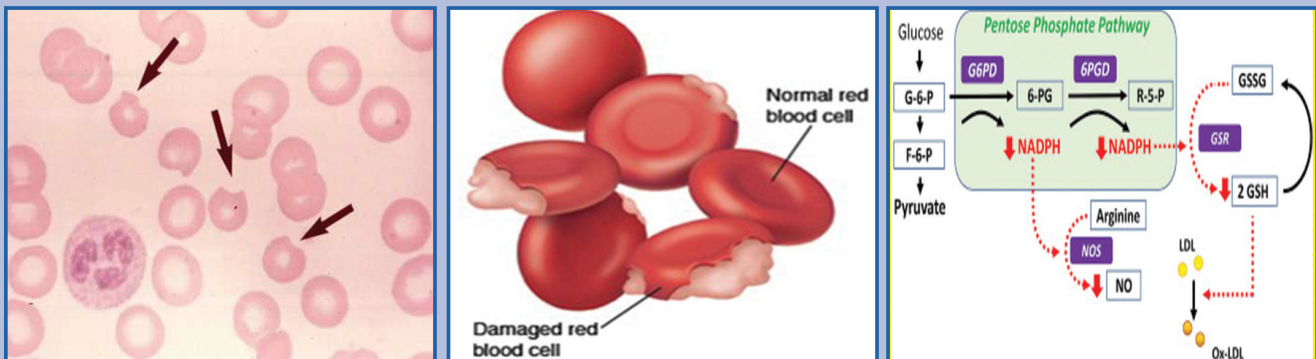
The reason behind the deficiency has been the mutations in the G6PD gene. What is the role of the gene? It gives the body instructions to make an enzyme known as G6PD which is involved in processing carbohydrates. Another function of the enzyme is that it protects red blood cells from potentially harmful molecules called reactive oxygen species.

Diagnosis of G6PD deficiency

It is diagnosed simply by blood tests to check G6PD enzyme levels. There are other diagnostic tests. One of them may be done by complete blood count, serum haemoglobin test and a reticulocyte count. The purpose of all these tests has been to get information about the red blood cells in the body. The normal test result informs about G6PD activity in one's blood cells. A normal or no G6PD- result for adults is 5.5 to 20.5 units/gram of haemoglobin. Less than 10% of normal means that one has severe deficiency and chronic haemolytic anemia.

What does G6PD positive mean?

The G6PD deficiency has been a genetic disorder. It is mostly found in men. In that case the human body does not have enough of G6PD enzyme. G6PD helps red blood cells work well. Also it protects them from substances in the blood that could harm them.



Since it is a hereditary disease, there is no way to cure it and no method to treat the disease. But it can be managed by supportive care and discontinuation of triggers. Doctors generally prescribe antioxidants such as vitamin E or selenium. But these are not effective treatment of G6PD.

What are the triggers of G6PD and what happens when it is high?

There are three main triggers of G6PD. These are infections, certain foods and certain drugs. Food ingestion triggering haemolysis can be a telltale sign for a positive diagnosis. Generally, G6PD is high in the case of new-born babies. In adults the deficiency is not common. But if it is found in older patients then it must reflect the presence of a young red blood cell population with reticulocytotic.

Extreme longevity of human being likely to rise in this century

How many people around us have ever seen people with longevity of around 110 years? The recorded oldest living person was Jeanne Calment of France. She was 122 when she died in 1997. But currently, amongst the living persons of the world, the oldest person is 118-year-old Kane Tanaka of Japan. Will there be any man with such an extreme longevity in the coming days? A new research observed that yes, it is likely.

The observation of the new research

Extreme longevity of human being means people living for more than 100 years. A new research about the extreme longevity was done by a group of scientists in the University of Washington. They observed that high longevity will likely to continue to rise slowly by the end of this century. Their estimates show that a lifespan of 125 years, or even 130 years, is possible. The new study reportedly published in June 30, in Demographic Research, a famous Journal on this subject.

Method of study and its observation

The researchers have been known to have used statistical modelling to examine the extremes of human life. Among the experts in this area there have already been debates about the possible limits to what is referred to as the maximum reported age at death. Some scientists argue that disease and basic cell deterioration lead to a natural limit on human lifespan. Others maintain that there is no cap, as evidenced by record-breaking supercentenarians. Prof Adrian E Raftery, professor of sociology and of statistics at the University of Washington and Michael Pearce doctoral student took a different approach. They asked what the longest individual



human lifespan could be anywhere in the world by the year 2100. They used a common tool in modern statistics, Bayesian statistics. The researchers estimated that the world record of 122 years almost certainly will be broken, with a strong likelihood of at least one person living to anywhere between 125 and 132 years.

To calculate the probability of living past 110, and to what age, Raftery and Pearce turned to the most recent iteration of the International Database on Longevity, created by the Max Planck Institute for Demographic Research. That database tracks super-centenarians from 10 European countries, plus Canada, Japan and the United States.

CSR Activities & Events of SERUM throughout July, 2021

SERUM Half-yearly Meetings



24: Howrah Meeting 18: North 24Pgs & Nadia Meeting 10: Jharkhand Meeting



10: Asansol, Purulia & Bankura Meeting 9: Berhampore Meeting 3: Siliguri Meeting 2: Malda Meeting

SERUM Vaccination Drive started from July 23, 2021



3: Celebration of 3rd foundation day of SERUM Siliguri

1: SERUM Group felicitated the frontline doctors and handover free medicines to thalassaemic kids.



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