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Editorial

Long lasting immunity in COVID 19: Silver lining to the dark cloud

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Hello to all the enthusiastic readers!!! I hope everyone is safe and healthy!

Past many months we all are dealing with the huge turmoil that the pandemic has created may that be physical, mental, emotional or financial. . .

This complete havoc was although greatly due to the pandemic, but partly also due to the fear factor that was also as fast spreading as the virus itself. . .

Hence, amongst all the news uttering about the possible 3rd wave, the mortality rate associated with the second wave or any other associated crisis, the present editorial brings to the light the far awaited “good news” about the status of the immunity conferred by the virus post infection. . . .

A most recent study published in one of the most reputed publication “The Nature” have reported that, mild cases of COVID 19 leave those infected with lasting antibody protection and that the repeated illness is unlikely to occur in such cases.

The researchers found antibody-producing cells in people 11 months after first symptoms. These cells will live and produce antibodies for the rest of the people’s lives, and that’s strong evidence for long lasting immunity, they said.

During an active disease with the virus, the antibody producing immune cells multiply rapidly and circulate rapidly in the blood, which raises the antibody levels very high in the blood. These levels then drop of from the blood once the infection gets resolved from the body. Some

amounts of these cells which are long lived plasma cells migrate to the bone marrow and remain dormant there to churn out the immune response whenever there is a re exposure of the virus. . .

Fifteen of the 19 bone marrow samples from people who had COVID-19 contained antibody- producing cells specifically targeting the virus that causes COVID-19 four months later in contrast to 11 people who never had COVID-19.¹

In addition, another recent study done on large cohort of population from Denmark had found that protection against repeat SARS-CoV-2 infection is robust and detectable in majority of individuals, protecting 80% or more of the naturally infected population younger than 65 years of age within the observation period of 6 months. However, their study reports less than 50% (47%) immunity in older patients above 65 years of age.² Several other cohort studies from different parts of the world including studies from the UK, Qatar and the USA also reported reinfection to be rare occurring in less than 1% of all the COVID cases.^{2,3}

A very important study on reinfection status of the healthcare workers from UK found that the risk of reinfection with SARS-COV-2 was reduced by 83% for at least 5 months after the initial infection.³ In the Denmark healthcare worker population, it was observed that the risk of re infection was 1.38 times higher in front line healthcare workers working in COVID-19 wards than other health care workers in the hospital. The seroprevalence for IgG although was found was about 20%.²

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The gist of many seroprevalence studies showed immunological memory to SARS-COV-2 of about 95% up to 8 months after infection based on measurements of antibodies, memory B cells and CD4 and CD8 T cells.⁴ However, concentrations of antibodies against both SARS-CoV-2 spike and receptor binding domain decreased moderately over 8 months study period, the number of memory B cells increased. In individuals aged more than 65 years of age this SARS-CoV-2 specific CD4 and CD8 T-cell responses have been found to be disrupted and this coupled with scarcity of naïve T cells was associated with ageing and worse COVID-19 prognosis. Thus, vaccinating the older population should be the priority drive based on the results of various studies published this year.^{4,5}

In a nut shell, we can hope for better outcomes in the near future in terms of the adaptive immunity against this deadly virus and can fetch out more and more measures to keep every stratum of our beautiful world safe and healthy. . . .


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