

BLOOD GROUPS AND COVID-19

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The new world after COVID-19 is doubtful to return to the world it was. The effect of the pandemic is speeding up several researches in order to find an effective cure. The main focus is on the vaccine and to discover a potential biomarker that can help in the diagnosis and treatment of the disease. Studies are also focused on knowledge, attitude and practices regarding COVID-19 so that effective policies can be made ^[1, 2]. Recently, the effect of blood groups on COVID-19 and its effects are under investigation.

It has been reported that individuals with type A blood group are at higher risk of getting COVID-19 compared to other blood types, whereas individuals with type O blood group have a lower risk of getting infection compared to others ^[3]. There are 34 recognized human blood group systems, as already identified, and hundreds of individual antigens and alleles in the blood group. Differences in antigen expression in the blood group can increase or decrease the sensitivity of the host to many infections. ABO antibodies to certain bacterial pathogens and enveloped viruses may play a crucial role in the development of COVID-19 ^[4]. In past, studies have reported association of blood groups with different diseases ^[5,6].

Internationally, they used retrospective health data on 14,112 individuals screened for SARS-CoV-2 with a documented blood type to determine the correlation between blood types of ABO and Rh and infection, intubation, and death. A slightly increased prevalence of infection among non-O forms was observed. The risk of intubation was reduced for type A and increased for type AB and type B relative to type O, while the risk of death for type AB was increased and for type A and type B decreased. For all three outcomes, the scientist observed that the Rh-negative blood type had a protective effect ^[7].

In conclusion, the ABO blood groups showed different risk associations for COVID-19 infection. An increased risk was substantially correlated with blood group A. Blood group O, on the other hand, was correlated with a reduced risk, thus indicating that blood type ABO is a biomarker of differential susceptibility to COVID-19 ^[3]. However, future studies are expecting to have some reasonable answer to this association of COVID-19 with ABO blood group.

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