Monoclonal antibody and blood plasma abo blood group based therapy against covid-19

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In new decade new coronavirus emerged. COVID-19 (SARS-CoV-2) has nucleic acid sequence similarity 96% with bat coronavirus, 79.6% SARS-CoV-1. SARS-CoV-2 and SARS-CoV-1 have common human host-cell ACE2 receptor. This similarity helps for effective vaccine and antibody development. At Wuhan, China, convalescent plasma therapy achieved 70% recovery results. ABO blood group susceptibility study revealed O blood group were very low risk whereas A were at high risk against COVID-19. ABO natural antibodies have positive effect to slowdown COVID-19 in less hygienic environment (less developed) regions. Isolation of specific antibody from EBV transformed B-lymphocyte recovered patients is encouraged. Production of potent neutralizing antibody and vaccine is required. We identified the sensitive immunogenic amino acid segment (318-510) in S1-protein domain that contains important and essential amino acids including cysteine, glutamic acid and aspartic acid, which associated with ACE2 expression.

Keywords: Monoclonal antibody, COVID-19, Spiked protein, ACE2, ABO blood group

Biography

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