

SARS-CoV-2 vaccines: A double-edged sword throughout rapid evolution of COVID-19

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Abstract

After more than 2 years of the coronavirus disease 2019 pandemic caused by severe acute respiratory syndrome coronavirus 2, several questions have remained unanswered that affected our daily lives. Although substantial vaccine development could resist this challenge, emerging new variants in different countries could be considered as potent concerns regarding the adverse effects of reinfection or postvaccination. Precisely, these concerns address some significant and probable outcomes in vaccinated or reinfected models, followed by some virus challenges, such as antibody-dependent enhancement and cytokine storm. Therefore, the importance of evaluating the effectiveness of neutralizing antibodies (nAbs) elicited by vaccination and the rise of new variants must be addressed.

Keywords: antibody-dependent enhancement, neutralizing antibodies, SARS-CoV-2, vaccine