

Editorial: Immunology and Immunopathology of COVID-19: Precision Medicine and Individualized Treatment Approach are Decisive Factors



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As I noted in my previous editorial, It is necessary to examine the immunological aspects of COVID-19. Thus, in order to identify the underlying mechanisms, design appropriate treatment protocols, and effective vaccination, we started to conduct a multicenter cohort study entitled “Iran-Cohort Study of COVID-19 Immunology and Immunopathology”. This comprehensive multicenter cohort study is underway at Immunoregulation Research Center, Shahed University, Tehran, Iran.

Currently, we recruited more than a thousand COVID-19 subjects from seven provinces of Iran. For all patients, we evaluated clinical parameters and several laboratory factors, and some are underway. Although final report summarizing might take some time, preliminary findings indicate differences in immunopathology and immune responses at various stages of the disease, severity of involvement, the presence or absence of comorbidities, and the use of different drugs in some subjects who seem to have similar conditions.

These individual variations can be caused by either host-related factors (genetic and epigenetic factors), psychological status, lifestyles (job position, nutrition, physical activity, cigarette smoking status, and substance abuse), and microbiota; or by virus-related factors such as viral load, probable subtypes, and mutations; or by environmental factors or other unknowns.

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Therefore, it is neither practical nor ethical to prescribe the same recipe for every COVID-19 patient, in general. Also, it is not rational to treat different severity stages of the disease similarly. Therefore, each person should be carefully examined based on the clinical and paraclinical conditions, the status of laboratory parameters, immunological responses, and other influential factors, many of which are unfortunately still unknown. Finally, it is recommended that each case be considered in precision medicine, and an individualized treatment approach be implemented.

Ethical Considerations

Compliance with ethical guidelines

There were no ethical considerations to be considered in this research.

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Conflicts of interest

The authors declared no conflict of interest.

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