Editorial

COVID-19: A Worldwide Gene Polymorphism

COVID-19 created a very harmful and disastrous experience for humans. This experience was associated with very heavy financial and emotional costs (1). Many people lost their lives during this dangerous and deadly pandemic; many suffered short-term or long-term sequellae and many suffered mental injuries as a result of the injuries caused by the disease, which were sometimes irreversible (2, 3). But that was not the whole story. Medical scientists and healthcare workers, both in the clinical field and in the field of basic medical sciences, worked hard to discover the mystery of this disease. Several areas were investigated jointly between basic and clinical sciences and extensive research was conducted on it (4, 5).

One of these areas was the study of gene polymorphism. An attempt was made to investigate the relationship between gene polymorphism and the chance of infection, the possibility of developing dangerous symptoms, the rate of response to treatment, and the rate of complications or the chance of death. One of the genes whose polymorphism has been widely investigated in COVID-19 is the gene is the ACE1 and ACE 2 gene polymorphism (6-8). Several studies have been performed all over the world with significant results demonstrating the significant effects of ACE1 polymorphism on the fate of COVID-19 patients both inside and outside Iran (7-10).

In this issue of the JCMA, the study by Karimi, et al. has demonstrated the role of this gene polymorphism in one of the ethnic groups in Iran (11); a finding in concordance with similar studies (7-9). It seems that gene polymorphism could have a significant effect not only on the geographical-related prevalence of COVID-19 but also on the severity of the disease and the clinical fate of the patients (12, 13). However, the following loci have been proposed as the most probable COVID-19-related ones: ApoE, ACE1, TMPRSS2, CCR5, and HLA loci (14); while ACE1 D/I and C3 polymorphisms have demonstrated the greatest correlation with COVID-19 prevalence/mortality (12-14) which could be supporting the need for studies in Iran as one of the countries most hit by COVID-19, including the study by Karimi, et al. (11). This is another proof for the paradigm shift in medicine (15).

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