

عنوان مقاله:

Seroprevalence of Anti-SARS-CoV-2 IgG and IgM Antibodies among Government Employees in Iran

محل انتشار:

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خلاصه مقاله:

The COVID-19 disease emerged in Wuhan, China, in December 2019 and quickly became a global health threat. Around 6,947,192 people have been killed around the world so far, including 146,292 in Iran. In addition to the definitive diagnosis of the disease by RT-PCR, immunological and serological tests can check the anti-SARS-CoV-2 N protein antibody titer in people at different stages of infection with acceptable sensitivity and specificity. The serological examination is an effective and efficient method for determining the prevalence of the disease, especially when asymptomatic cases are present or the diagnosis of symptomatic cases is incomplete. The study examined the seroprevalence of COVID-19 at the Razi Vaccine and Serum Research Institute (RVSRI) and the Agricultural Research, Education, and Extension Organization (AREEO). A total of 493 blood samples were collected from volunteers in June 2020 in AREEO, and 380 samples were collected in June and July 2020 in RVSRI. The total number of volunteers from both organizations was 873. Standard ELISA kits were used to measure IgG and IgM antibodies against SARS-CoV-2. A statistical analysis of the obtained data was conducted using SPSS (version 22.0). Among the total 873 volunteers examined in RVSRI and AREEO, 10.5% had elevated serum titers either for IgM or IgG, 3.55% of whom were women and 6.95% were men. Generally, 8.8% of people tested positive for IgM, which showed a recent infection with COVID-19 in people at that time and partially indicated the start of a new wave of COVID-19. In RVSRI, 3.42% of people with positive IgM titers (positive or negative IgG titers) were women and 5.53% were men. In AREEO, 3.02% were women and 5.72% were men. The seroprevalence rate of COVID-19 in RVSRI was 11.6%, 4.2% of which were women and 7.35% were men, with no significant difference between women and men. The COVID-19 seroprevalence in AREEO was 9.7%, 3.22% of which were women and 6.5% were men, with no significant difference between women and men.

کلمات کلیدی:

ELISA, IGM, IgG, SARS-CoV-2, Seroprevalence

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