

عنوان مقاله:

The Performance of SARS-CoV-2 Serology Testing in the Diagnosis of COVID-19

محل انتشار:

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خلاصه مقاله:

Background & Objective: COVID-19 reverse transcription-polymerase chain reaction (RT-PCR) has been a reference test for diagnosing a disease since the very beginning of the pandemic. COVID-19 serology tests have also been developed and used to estimate the prevalence of individuals who have already been infected. We aimed to evaluate the performance of serology tests for the diagnosis of patients who had been referred to medical centers with acute symptoms. **Methods:** In this cross-sectional study, 80 individuals suspected of COVID-19 who had been referred to Imam Khomeini Hospital Complex, Tehran, Iran, were examined. Upper respiratory tract specimens for RT-PCR and blood samples for COVID-19 IgM and IgG antibody level tests were collected and the results were compared. **Results:** The overall proportion in agreement, the agreement between positive results, and the agreement between negative results when comparing RT-PCR and IgM serology test were 40% ($\kappa = -0.006$, $P = 0.9$), 33%, and 66.6%, respectively, and when comparing RT-PCR and IgG serology test were 46% ($\kappa = -0.006$, $P = 0.94$), 43.5%, and 55.5%, respectively. **Conclusion:** The absence of a gold standard method for the diagnosis of COVID-19 makes it very challenging to determine the true sensitivity and specificity of different methods. The study results revealed no agreement between the two methods; so the RT-PCR test for upper respiratory tract specimen cannot be replaced with COVID-19 serology test for the diagnosis of patients with acute symptoms.

کلمات کلیدی:

Antibody, COVID-۱۹, SARS-CoV-۲, serology

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