LETTER TO THE EDITOR

Point-of-Care Testing for SARS-CoV-2 Antibodies for COVID-19 Diagnosis: a Summative Analysis

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COVID-19 is a new disease caused by a novel coronavirus, SARS-CoV-2 that has already resulted in a pandemic [1]. The disease is a respiratory infection that can result in severe respiratory problems [2]. Since COVID-19 is still a serious global problem, it is necessary to have a good system for disease control. An important preventive measure is the early detection of disease. To achieve rapid detection, point-of-care testing (POCT) can play an important role. There are many available POCTs for COVID-19 detection. Here, the authors summarize available data from publications on the diagnostic properties of POCTs for SARS-CoV-2 antibodies for COVID-19 diagnosis. A summative analysis was done on the data from the primary literature search using the PUBMED database (time period of search: January 2019 to January 2021, 24-month period). Search terms: point of care testing, COVID-19, coronavirus; inclusion criteria: POCT for antibodies, report on diagnostic property, samples from suspicious patients. Exclusion criteria: non English literature, incomplete report). In this study, 4 data-completed publications from 18 publications [3-5] are recruited for further summative analysis. There are data from assessment of diagnostic properties on 696 and 696 samples for IgM and IgG tests, respectively. According to the summative analysis, the shortest period for analysis of the POCT is 5 minutes and the longest period is 20 minutes. For the IgM test, the ranges of
sensitivity and specificity are 50.0% - 90% and 94% - 100%, respectively. For the IgG test, the ranges of sensitivity and specificity are 54.5 % - 100 % and 33.3 % - 99 %, respectively. Based on the summative analysis, there are wide ranges of diagnostic properties (sensitivity and specificity) available for POCTs for SARS-CoV-2 antibodies for COVID-19 diagnosis. This might imply a possible problem using POCTs for SARS-CoV-2 antibodies for COVID-19 diagnosis in suspicious patients.

Declaration of Interest:
None.

References: