Rapid antigen detection test for seven acute respiratory syndrome coronavirus 2: How to use it properly

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Abstrak

Cases of coronavirus disease 2019 (COVID-19) in Indonesia are still increasing and even higher in the last few weeks. Contact tracing and surveillance are important to locate cases in the community, including asymptomatic individuals. Diagnosis of COVID-19 depends on the detection of viral RNA, viral antigen, or indirectly, viral antibodies. Molecular diagnosis, using real time, reverse transcriptase polymerase chain reaction (RT-PCR), is the common standard method; however, it is not widely available in Indonesia and requires a high standard laboratory. Rapid, point-of-care antibody testing has been widely used as an alternative; however, interpretation of the results is not simple and now it is no longer used by the Indonesian government as a screening test for people travelling between locations. Thus, the rapid antigen detection test (Ag-RDT) is used by the Indonesian government as a screening test for travellers. As a result, many people buy the kit online and perform self-Ag-RDT at home. This raises the question of how safe and accurate it is to perform self-Ag-RDT at home. Before a test is applied, it is suggested to research its sensitivity and specificity, as compared to gold standard, and its limitations. In this article, laboratory diagnosis of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is discussed, with an emphasis on Ag-RDT and the recommendation to use it properly in daily practice.