ALGORITHMS FOR TESTING COVID-19 FOCUSED ON USE OF RT-PCR AND HIGH-AFFINITY SEROLOGICAL TESTING: a consensus statement from a panel of Latin American experts

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Abstract

The COVID-19 pandemic has caused an unprecedented public health, social, and economic crisis. Improving understanding on available tests for detecting COVID-19 is critical for effective management of the pandemic. We proposed that a multidisciplinary expert panel can establish recommendations on ideal use of diagnostic tools, with a focus on RT-PCR and serological high-affinity antibodies (both IgM and IgG) tests for the Latin America region. STUDY DESIGN: A collaborative multidisciplinary panel of 5 recognized experts in Latin America (an infectious disease specialist, three pathologists and an immunologist) was convened and supported by Roche Diagnostics to develop standard guidelines and an evidence-based document of best practices on the use of diagnostic tools for COVID-19. RESULTS: The authors reached consensus on the applicability of diagnostic tools to provide testing algorithms for the use of RT-PCR and serological high-affinity antibodies (both IgM and IgG) tests in three settings: 1) For asymptomatic subjects exposed to a SARS-CoV-2 infected person; 2) For epidemiological purposes and; 3) For symptomatic subjects. CONCLUSION: The serological high-affinity SARS-Cov-2 antibodies (both IgM and IgG) tests play a key role in COVID-19 diagnosis. These tests can be applied for suspected false-negative RT-PCR results and for individual determination of response. The use of these tests can also contribute greatly to public health strategies, such as population screening and supporting vaccination planning. Serological status for high-affinity antibodies (both IgM and IgG) should be performed ideally 21 days after potential infectious contact, given that the majority of exposed individuals will have seroconverted.

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