

Clinical and social importance of stool RT-PCR: a follow-up test for COVID-19 and long COVID-19

Importancia clínica y social de la RT-PCR en heces: una prueba de seguimiento para COVID-19 y COVID-19 prolongada

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To the Editor,

I revisit with great interest the article by Rojo-del Moral¹ to point out that indeed, long COVID syndrome represents a high percentage of current medical consultations and is of high social importance due to the high costs associated with managing its chronic complications. It becomes challenging especially in rural areas, where tests to diagnose COVID-19 are limited, especially to differentiate whether it is a recent infection, a post-acute phase, or a case of long COVID. Considering that a large percentage of COVID-19 patients begin with GI signs, such as diarrhea, there is a possibility of detecting SARS-CoV-2 in feces. In this regard, a pilot study was conducted, which included 2 groups of COVID-19 patients: 1) 145 subjects with active omicron variant BA1, and 2) 183 asymptomatic subjects (originating from the State of Oaxaca, Mexico) who had the omicron variant BA1 three months ago and were treated. Stool, oropharyngeal, and nasopharyngeal samples were taken and sent to the clinical pathology laboratory for RNA extraction and subsequent real-time polymerase chain reaction (RT-PCR) testing for COVID-19. Of the group of patients with active COVID-19, 139 tested positive in oropharynx, nasopharynx, and feces, while from the other group, 167 fecal samples tested positive, and negative in oropharyngeal and nasopharyngeal swabs, respectively. This distribution shows a positive association, with a Yates X² value of 122.2, a value

of < 0.0000001, ORR of 90.06, a 95% confidence interval of 12.71-638.1, sensitivity and specificity rates of 98.18% and 98.89%, respectively. This suggests that RT-PCR in feces could be an indicator of active infection and/or a case of long COVID. Its utility in the routine clinical practice at the primary care level will have to be corroborated in epidemiological replication studies. This pilot test provides clinical evidence that reinforces the postulate of the GI transmission via enterohepatic circulation, considering that we found a positive result for SARS-CoV-2 in feces. Probably another mechanism through which the virus enters the body is through the enterohepatic circulation by binding to heparan sulfate, apolipoprotein E, and angiotensin-converting enzyme 2 at endothelial level, allowing its internalization, activating vascular endothelial growth factor and cathepsin E, even storing it in cells or tissues in syncytia, thus escaping detection in both the nasopharynx and oropharynx². In conclusion, evidence is provided for a new test in the monitoring of acute and long COVID: RT-PCR in feces.

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Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

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