

## Insights to Improve the Diagnosis and Follow-Up of COVID-19

**Mahmoud Abdelnabi<sup>1\*</sup>, Nouran Eshak<sup>2</sup>, Abdallah Almaghraby<sup>3</sup> and Karim Ziada<sup>4</sup>**

<sup>1</sup>Cardiology and Angiology Unit, Clinical and Experimental Internal Medicine Department, Medical Research Institute, Alexandria University, Alexandria, Egypt

<sup>2</sup>Internal Medicine Department, Texas Tech University, Health Science Center, Lubbock, Texas, USA

<sup>3</sup>Cardiology Department, Faculty of Medicine, Alexandria University, Alexandria, Egypt

<sup>4</sup>Radiodiagnosis Department, Medical Research Institute, Alexandria University, Alexandria, Egypt

**\*Corresponding Author:** Mahmoud Abdelnabi, Cardiology and Angiology Unit, Department of Clinical and Experimental Internal Medicine, Medical Research Institute, University of Alexandria, Alexandria, Egypt.

**Received:** June 03, 2020; **Published:** July 03, 2020

With the current escalating surge of newly diagnosed cases of COVID-19, healthcare givers are already facing a new dilemma which is the lack of efficiency of the currently used gold standard diagnostic test which is reverse-transcription polymerase chain reaction (RT-PCR) and that can result in high false negative results in asymptomatic or mildly symptomatic patients with flu-like symptoms which was the main problem that resulted in the rapid rate of viral spread across the world.

Ai, *et al.* [1] reported in a large report of 1014 cases in Wuhan, China that RT-PCR may have a sensitivity as low as 60 - 70% while Computed Tomography (CT) chest had a higher sensitivity of 94 - 97% and even CT showed improvement before RT-PCR became negative. Kanne, *et al.* [2] highlighted that patients with pneumonia due to COVID-19 may have lung abnormalities on CT scan even with an initially negative RT-PCR. Zhao, *et al.* [3] proposed that CT scan can be helpful in early screening of highly suspected cases, evaluation of the severity and extent of disease and for monitoring changes during treatment. The typical CT features of COVID-19 pneumonia are peripheral multifocal ground glass opacities (GGO) which can start unilaterally but usually progress to cause bilateral involvement with lower lung predominance. Most patients with COVID-19 pneumonia have GGO or mixed GGO and consolidation and vascular enlargement in the lesion. additional CT features include septal thickening (creating a crazy paving pattern), traction bronchiectasis and thickening of the adjacent pleura. On the other hand, pleural effusions, pericardial effusions and lymphadenopathy are uncommon features [2,3].

Although it is not feasible to perform mass CT-scan for the screening of COVID-19 status but based on the above-mentioned reports, the combined use of RT-PCR and CT chest in asymptomatic or mildly symptomatic cases with high clinical suspicion of having COVID-19 can be considered to boost the efficiency of diagnosis and also in can be used in the follow-up of proven infected cases and consequently will result in better control over the current pandemic.

### Disclosure

The authors declare no conflict of interest.

### Bibliography

1. Ai T, *et al.* "Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases". *Radiology* (2020): 200642.
2. Kanne JP, *et al.* "Essentials for radiologists on COVID-19: an update-radiology scientific expert panel". *Radiology* (2020): 200527.
3. Zhao W, *et al.* "Relation between chest CT findings and clinical conditions of coronavirus disease (COVID-19) pneumonia: a multi-center study". *American Journal of Roentgenology* 214.5 (2020): 1072-1077.

**Volume 7 Issue 8 August 2020**

© All rights reserved by Mahmoud Abdelnabi, *et al.*