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Triple-Rule-Out Computed Tomography Angiography: Evaluation Of Acute Chest Pain In Covid-19 Patients In The Emergency Department

Dear Editor,

Thank you for giving us the opportunity to submit a revised draft of the manuscript. We appreciate the time and effort that you and the reviewers dedicated to providing feedback on our manuscript and are grateful for the insightful comments on and valuable improvements to our paper. We have incorporated most of the suggestions made by the reviewers. Please see below for a point-by-point response to the reviewers' comments and concerns.

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The elderly, especially those with DM, often have renal insufficiency and may not be suitable for CTA, so the results of renal function of 47 patients should be shown.

Response: When the patient groups included in the study were examined, no patient with high creatinine value was found. This situation was added to the Results section as "The creatinine values of 47 patients included in the study were within the physiological range."

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: Triple-rule-out computed tomography angiography (TRO CTA) is a comprehensive and feasible diagnostic tool in COVID-19 patients who were admitted to the emergency department (ED) for acute chest pain, please explain clearly. Triple-rule-out computed tomography angiography (TRO CTA) is NOT described clearly, please explain how the authors use the CTA to diagnose of the covid-19 patients, why and how triple rule out CTA, what is the criteria to diagnoses of COVID-19, how to detect for COVID-19.

Response: The patients included in our study consisted of patients diagnosed with covid-19 using laboratory markers (Real time PCR). This situation in the Results section, "In this study, 53 patients who were previously diagnosed with laboratory-proven(real time PCR) covid-19 pneumonia and underwent triple rule-out computed tomography angiography due to chest pain between September 2020-January 2021, were retrospectively searched. Added as. Examination findings, ECG and laboratory markers may not always help us make a diagnosis in patients presenting with chest pain. In addition, since hypercoagulability occurs in COVID-19 patients, D-dimer values increase and the differential diagnosis list expands. Since TRO CTA has the ability to rule out pulmonary thromboembolism, acute aortic syndrome and coronary artery disease at the same time, it provides convenience in diagnosis for clinicians, especially in the emergency setting

1) Science editor:

The authors present a retrospective study on the use of TC angiography for the diagnosis of chest pain in patients with COVID19. The study is within the scope of the journal, and there is no evidence of ethical or academic misconduct. The authors present their findings clearly, and illustrate well the diagnostic yield of TRO CTA for the detection of cardiovascular and thromboembolic causes of pain in patients with COVID19. However, more information on the context in which the test was used is necessary to formulate any conclusions - what was the diagnostic protocol used prior to TRO CTA realization? Had the patients already been previously diagnosed with COVID19, and were returning to the ED with chest pain? Were patients presenting with chest pain in the ED first tested for COVID19, and then directed to TRO CTA? Were any others tests obtained prior to TRO CTA in order to define which patients would undergo the exam (EKG, troponin,D-dimer)? The point raised by reviewer 05346206 about renal function (whether there was any screening previous to TRO CTA) needs to be addressed by the authors.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade D (Fair)

Response: Patients were diagnosed with COVID-19 using real time PCR before performing TRO CTA. This situation in the Results section, "In this study, 53 patients who were previously diagnosed with laboratory-proven(real time PCR) covid-19 pneumonia and underwent triple rule-out computed tomography angiography due to chest pain between September 2020-January 2021, were retrospectively searched. Added as

Patients who applied to the emergency department with chest pain consisted of patients who had previously been diagnosed with COVID 19. TRO CTA provides clinicians with great convenience in the diagnosis of pulmonary thromboembolism, coronary artery disease and acute aortic syndrome, since not every patient presenting with chest pain can be diagnosed with clinical findings, ECG data, and laboratory data. To indicate this situation, in the introduction part; “However, a normal ECG or cardiac biomarkers does not rule out acute cardiovascular disease and symptoms might be atypical [3]. Moreover, after the novel coronavirus disease 2019 (Covid-19) pandemic it has been more complicated to make a differential diagnosis list of acute chest pain in the ED. To date, many studies have presented that covid-19 causes hypercoagulability [4].” description has been added.

It was added to the Results section that the creatinine values of the patients included in the study were in the physiological range.

In our center, TRO CTA examinations are performed according to the eligibility criteria in the “ Eltabbakh, A. R., Dawoud, M. A., Langer, M., Moharm, M. A., Hamdy, E. A., & Hamisa, M. F. (2019). ‘Triple-rule-out’CT angiography for clinical decision making and early triage of acute chest pain patients: use of 320-multislice CT angiography. *Egyptian Journal of Radiology and Nuclear Medicine*, 50(1), 1-10.” article. Relevant explanations have been added to the Material and methods section. Based on this situation, ECG results are thought to be nonspecific and nondiagnostic. However, since the study was retrospective, ECG data of all patients could not be accessed. This situation added to the limitations.

(2) Company editor-in-chief:

I recommend the manuscript to be published in the World Journal of Radiology.

Response: Thank you for taking the time to evaluate our work and for your valuable comments.