

COVID-19 Pneumonia with Ischemic Heart Event After Neglect Yasser's COVID-19 Discrepancy Phenomenon and Its Regimen; The Seriousness Impact and Deterioration Outcome

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Abstract

Rationale: A novel COVID-19 is a multi-systemic serious worldwide pandemic. Undoubtedly, strict management with protocols and guidelines in the COVID-19 pneumonia is remarkable advice but its neglect may be leading to a critical event. Yasser's COVID-19 Discrepancy phenomenon is a novel descriptive phenomenon that is always seen in all COVID-19 pneumonia. Initial dramatic improvement of the clinical status of COVID-19 pneumonic patient, not a simultaneously after the management, not a coincide with laboratory, radiological, and electrocardiographic workup.

Patient Concerns: A 65-year-old married housewife Egyptian female patient was presented to the physician outpatient clinic with COVID-19 pneumonia that deteriorates after early spontaneous stoppage of all COVID-19 medications after the sense of generalized temporary improvement.

Diagnosis: COVID-19 pneumonia with angina after neglect Yasser's COVID-19 discrepancy phenomenon and its regimen.

Interventions: Electrocardiography, oxygenation, chest CT, and echocardiography.

Outcomes: Initial good and dramatic outcome but, the worst outcome with deterioration had happened after early spontaneously stopped all COVID-19 medications.

Lessons: The missed time, long-stay hospitalization, patient and governmental economic costs, and psychological stress on both patient and family are hazardous sequels due to neglect to follow Yasser's COVID-19 Discrepancy phenomenon and its regimen. This is a typical applied example of this phenomenon. Female sex, unstable angina with coronary artery spasm, elevated cardiac biomarkers, a Wavy triple sign (Yasser's sign) of hypocalcemia and COVID-19 pneumonia represent bad prognostic points and is indicating a high-risk condition.

Keywords: COVID-19, Coronavirus, Pneumonia, Yasser's COVID-19 Discrepancy Phenomenon, COVID-19 Pneumonia after Neglect

Abbreviations

COVID-19: Coronavirus disease 2019

ECG: Electrocardiogram

ICU: Intensive care unit

O₂: Oxygen

POC: Physician outpatient clinic

SGOT: Serum glutamic-oxaloacetic transaminase

SGPT: Serum glutamic-pyruvic transaminase

VR: Ventricular rate

Introduction

Cardiovascular disease is a risk factor and major cause of mortality and morbidity worldwide in COVID-19 patients [1]. Multiple mechanisms have been suggested for cardiac damage in the COVID-19 epidemic. The systemic inflammatory response in severe COVID-19 is the producing high levels of cytokines causing cytokine-release syndrome (CRS) that can injure multiple tissues, involving vascular endothelium and cardiac myocytes [2]. Plaque rupture causes acute ischemic event due to the

systemic inflammation and catecholamine surge in this disease [3, 4]. Coronary thrombosis also has been identified as a possible cause of acute ischemic attack in COVID-19 patients [5]. Yasser's COVID-19 Discrepancy phenomenon is a novel descriptive phenomenon that is always seen in all COVID-19 pneumonia [6]. In this phenomenon, there dramatic acute clinical improvement after management with the above regimen but there are delays in improvement with the time variation for the laboratory, radiological, and ECG workup. Generally, in medical diseases, the clinical response is commonly parallel to laboratory and radiological improvement. So, there is a direct relationship between clinical status and laboratory workup. But, the author revealed that there are deviations between the clinical response or improvement and the improvement in both laboratory, radiological, and ECG workup. Initial dramatic improvement of the clinical status of COVID-19 pneumonic patient, not a simultaneously after the management, not a coincide with laboratory, radiological, and ECG workup [6]. Unfortunately, no relevant studies are taking into consideration the time for identifying the relationship of the improvement in clinical versus and workup. These studies mostly signifying and mention for both used drugs and needed laboratory, radiological, and work up with no focusing on the above relationship between clinical status and laboratory workup. Yasser's COVID-19 Discrepancy phenomenon is an explaining phenomenon for the above relationship in COVID-19 pneumonia. Yasser's COVID-19 Discrepancy phenomenon is happening after giving the following medical regimen; cefotaxime; (1000 mg IV every 8hours), azithromycin (500 mg PO single daily dose), oseltamivir (75 mg PO twice daily only for 5 days), paracetamol (500 mg IV every 8 hours as needed), SC enoxaparin 80 mg twice daily), aspirin tablet (75 mg, once daily), clopidogrel tablet (75 mg, once daily), and hydrocortisone sodium succinate (100 mg IV every 12 hours; was tapered with time) were added. O₂ inhalation by O₂ cylinder (100%, by nasal cannula, 5L/min) was added on need. IVI fluids were sometimes given based on the clinical indications. Dose adjustment for some of the above drugs in hepatic impairment (HI), renal impairment (RI), cardiac, hypertensive, and diabetic patients were applied. The patient was daily monitored for temperature, pulse, blood pressure, and O₂ saturation [6]. The duration of this regimen is variable according to the improvement in the ECG, radiological, and laboratory workup but not the clinical status [6].

Case Presentation

A 65-year-old married housewife Egyptian female patient was presented to the physician outpatient clinic (POC) with tachypnea, fever, and cough. Fatigue, loss of appetite, and loss of smell were the associated symptoms. There is a recent contact with a confirmed case of COVID-19 pneumonia. The patient denied a history of cardiovascular diseases, the same attack, drugs, or any other special habits. Informed consent was taken. Upon general physical examination; generally, the patient was tachypneic, distressed, with a regular pulse rate of VR; 89 bpm (AF), blood pressure (BP) of 110/80 mmHg, respiratory rate of 21 bpm, the temperature of 39.5 °C, and pulse oximeter of oxy-

gen (O₂) saturation of 96%. Initially, the patient was treated with O₂ inhalation by O₂ cylinder (100%, by nasal cannula, 5L/min). The patient was maintained treated with cefotaxime; (1000 mg IV every 8hours), azithromycin (500 mg PO single daily dose), oseltamivir (75 mg PO twice daily only for 5 days), and paracetamol (500 mg IV every 8 hours as needed). SC enoxaparin 80 mg twice daily), aspirin tablet (75 mg, once daily), clopidogrel tablet (75 mg, once daily), and hydrocortisone sodium succinate (100 mg IV every 12 hours) were added. The patient was daily monitored for temperature, pulse, blood pressure, and O₂ saturation. She had spontaneously stopped all medications after the sense of generalized temporary improvement without physician consultation. Three days later, she presented again with severe ischemic chest pain, marked tachypnea (of RR; 32 bpm), and hypoxia (of O₂ saturation; 76%). The patient was managed in the ICU with COVID-19 pneumonia and ischemic chest pain according to the current Egyptian recommended protocol for COVID-19 infection. The initial ECG was done in the POC within 3 days of treatment stoppage showing normal sinus rhythm of VR; 89, ST-segment depression in both inferior (II and III) and anterior leads (I, aVL, V1, 2, 3, 5, and V6). There is a Wavy triple sign (Yasser's sign) of hypocalcemia that appeared in V4 lead (Figure 1A). The first chest CT without contrast was done during the day of hospital referral showing mild bilateral small-sized ground-glass opacities (Figure 2A). Currently, the patient was referred to the general hospital and was admitted to the critical care unit with COVID-19 pneumonia and ischemic heart disease. The initial complete blood count (CBC); Hb was 12.7 g/dl, RBCs; 4.84*10³/mm³, WBCs; 5.4*10³/mm³ (Neutrophils; 70.8 %, Lymphocytes: 20.4%, Monocytes; 8.8%, Eosinophils; 0% and Basophils 0%), Platelets; 222*10³/mm³. S. Ferritin was high; 169.85 ng/ml. D-dimer was high (0.790 ng/ml). CRP was high (42.9 g/dl). LDH was high (486 U/L). SGPT was normal (36 U/L), SGOT was normal (46.51 U/L). Serum creatinine was normal (0.61 mg/dl) and blood urea was normal (32.10 mg/dl). RBS was normal (221.6 mg/dl). Ionized calcium was slightly low 0.91 mmol/L). The troponin test was positive (11.4 U/L). CK-MB was high (67 U/L). ECG was repeated on the day of hospital discharge showing normalization of the above ST-segment depression. There is a Wavy triple sign (Yasser's sign) of hypocalcemia that appeared in the V6 lead (Figure 1B). The last chest CT without contrast was done on the day of hospital referral showing previously severe bilateral vague hazy variable-sized in healing ground-glass opacities (Figure 2B). The echocardiography was done on the presentation showing mild anteroinferior hypokinesia, and grade I, LV diastolic dysfunction with an EF of 55%. COVID-19 pneumonia with angina after neglect Yasser's COVID-19 discrepancy phenomenon and its regimen was the most probable diagnosis. The patient was discharged within 24 days of hospital admission nearly, after clinical, electrocardiogram, and workup improvement. The patient was continued on aspirin tablet (75 mg, OD) for three months, longstanding nitroglycerine oral capsules (2.5 mg BID), and calcium with vitamin D oral preparations (OD) for 2 weeks with follow-up. Further cardiac and chest follow-up was advised.

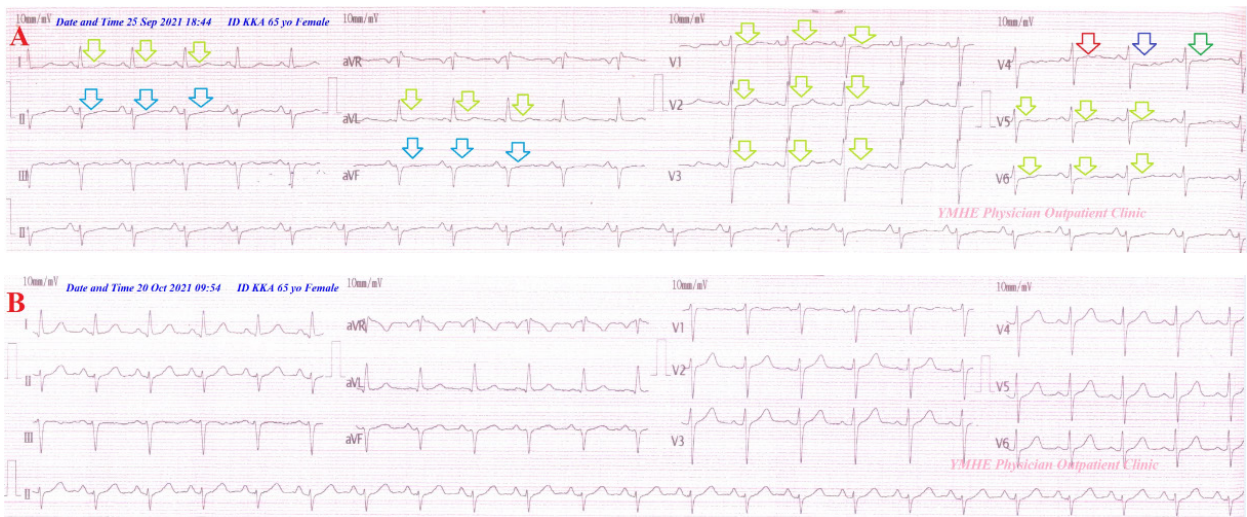


Figure 1: Serial ECG tracings; A. tracing was done within 3 days of treatment stoppage showing normal sinus rhythm of VR; 89, ST-segment depression in both inferior (II and III; light blue) and anterior leads (I, aVL, V1, 2, 3, 5, and V6; lime arrows). There is a Wavy triple sign (Yasser’s sign; red, green, and dark blue arrows) of hypocalcemia appeared in V4 lead. B. tracing was done on the hospital discharge showing normal sinus rhythm of VR; 97 with normalization of the above ST-segment depression.

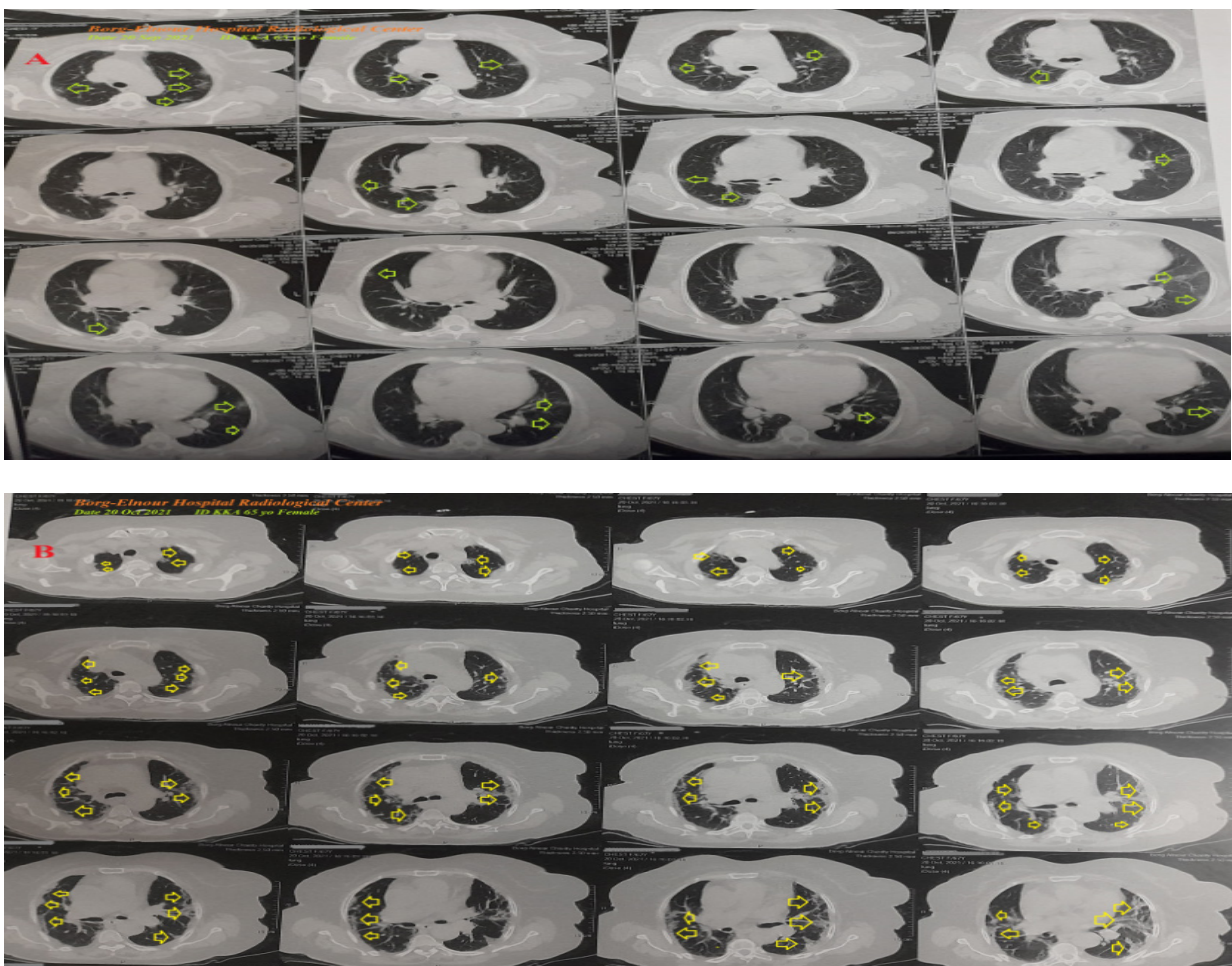


Figure 2: (A). Chest CT without contrast was done on the initial presentation showing mild bilateral small-sized ground-glass opacities (lime arrows). (B). Chest CT without contrast was done on the hospital discharge showing previously severe bilateral vague hazy variable-sized in healing ground-glass opacities (yellow arrows).

Discussion

Overview:

- A 65-year-old married housewife Egyptian female patient was presented to the POC with COVID-19 pneumonia that deteriorates after early spontaneous stoppage of all COVID-19 medications after the sense of generalized temporary improvement to be admitted to the intensive care unit (ICU) with severe COVID-19 pneumonia and unstable angina.
- **The primary objective** for my case study was the presence of a patient who presented with severe COVID-19 pneumonia and unstable angina in the ICU after early spontaneous stoppage of all COVID-19 due to her sense of generalized temporary improvement.
- **The secondary objective** for my case study was the question of; how did you manage the case at home?
- There was a history of confirmed the COVID-19 case. The presence of confirmed the COVID-19 case, and bilateral ground-glass consolidation on top of acute tachypnea will strengthen the COVID-19 diagnosis.
- Interestingly, the initial dramatic response in the POC for COVID-19 medications had happened.
- But, the early spontaneous stoppage of all COVID-19 medications after the sense of generalized temporary improvement occurred.
- An initial dramatic response of COVID-19 pneumonia to medications then deterioration after early spontaneous stoppage of all COVID-19 medications is a picture of Yasser's COVID-19 Discrepancy phenomenon [6].
- The missed time, long-stay hospitalization, patient and governmental economic costs, and psychological stress on both patient and family are hazardous sequels.
- The presence of ECG ST-segment depression in both inferior and anterior leads with elevated cardiac biomarkers that were reversed by treatment is mostly reflecting unstable angina on top of coronary artery spasm.
- A Wavy triple sign (Yasser's sign) of hypocalcemia that appeared in the single lead (V4) will be another but mild risk impact.
- Female sex, unstable angina with coronary artery spasm, elevated cardiac biomarkers, a Wavy triple sign (Yasser's sign) of hypocalcemia, and COVID-19 pneumonia are risk factors.
- Acute heart failure was the possible **differential diagnosis** for the current case study.
- I can't **compare** the current case with similar conditions. There are no similar or known cases with the same management for near comparison.

- The only limitation of the current study was the unavailability of coronary angiography.

Conclusion and Recommendations

- The missed time, long-stay hospitalization, patient and governmental economic costs, and psychological stress on both patient and family are hazardous sequels due to neglect to follow Yasser's COVID-19 Discrepancy phenomenon and its regimen. This is a typical applied example of this phenomenon.
- Female sex, unstable angina with coronary artery spasm, elevated cardiac biomarkers, a Wavy triple sign (Yasser's sign) of hypocalcemia and COVID-19 pneumonia represent bad prognostic points and is indicating a high-risk condition.

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