

Report of Rare Cases of Heart Complications in Covid-19 Patients

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Abstract

It is known that the new Coronavirus has tropism by the heart cells, especially in the most severe presentations of the disease. Several cardiac complications, directly and indirectly, related to infection have been described.

Key Words: Cardiac tamponade; Pacemaker; Arrhythmia; Covid-19; Atrioventricular block.

Abbreviations

RT-PCR - Rapid Test Polymerase Chain Reaction

Case 1

Introduction

It is known that the new Coronavirus has tropism by the heart cells, especially in the most severe presentations of the disease. Several cardiac complications, directly and indirectly, related to infection have been described.

Report

The first case is of a patient, 58 years old, without comorbidities, was admitted to the emergency room with cough, fever and dyspnea beginning 5 days ago, referring to significant worsening in the last 24 hours. There was tachypneic (RR= 32 irpm), O₂ saturation = 87%, tachycardic (HR = 120 bpm), hemodynamically stable without active vessel drugs. Unchanged cardiac auscultation, lungs with diffuse snoring. Laboratory tests had leukopenia of 3220 and lymphopenia. Other complementary tests within the normal range.

Oxygen was offered by non-reinhalante mask at 15 liters per minute and transferred to the Intensive Care Unit. On the third day of hospitalization, he had to be intubated, remaining sedate with Midazolam and Fentanyl associated with neuromuscular blocker in continuous infusion pump. He presented alterations of myocardial necrosis markers, but without electrocardiographic alterations and echocardiography within the normal range. On the tenth day of hospitalization, he was extubated, remaining eupneic with an O₂ catheter. On the twelfth day, the respiratory pattern worsened hypotension and tripled the d-dimmer result of the previous day. Urgent echocardiogram was performed that showed imminent signs of cardiac tamponade. He underwent urgent minithoracotomy in the operating room, drained 800 ml of citrus yellow fluid and referred for analysis. The liquid presented increased Lactic Dehydrogenase (LDH), glucose and normal proteins and Rapid Test Polymerase Chain Reaction (RT-PCR) of the liquid was performed, presenting positive results for Coronavirus. Three days after drainage he was discharged to the room and after 24 days since his admission, he was discharged from the hospital.

Conclusion

Introduction

There are few data to date of pericardial effusion and Coronavirus infection and analysis of pericardial fluid with the presence of the virus has not been found by the authors so far. This is a very uncommon case of heart complication of Covid-19, as we confirm in the literature [1-3]. Even so it deserves attention to be remembered as having Covid-19 as the aetiological factor.

Case 2

Introduction

It is known that Coronavirus has a certain degree of tropism by the heart; the events of its direct action to the heart are more described in relation to the electrical conduction system and inflammatory processes of the myocardium. These events usually occur more frequently in presentations of severe forms of the disease.

Case report

The second case is of a 53 years old, female, Sought Emergency Room due to cough, dyspnea to medium efforts and dizziness. Symptoms started 5 days before seeking medical help; there have been worsening scans in the last 24 hours. The patient reported a history of systemic arterial hypertension in regular use of Losartan 50 mg/day. The patient was isolated due to the possibility of Covid-19. Physical examination was bradycardic, acyanotic and with respiratory rate of 28 irpm/min. Cardiac auscultation with regular rhythm, no murmurs. Pulmonary auscultation without alterations. Blood Pressure (BP) = 100x60 mmHg, SatO₂ = 95%. Remaining physical examination without changes. Among the complementary tests, what drew the most attention was the resting electrocardiogram that demonstrated total AVF (Atrio Ventricular Fibrillation) with a heart rate of 35 bpm. Atropine and Dopamine were administered in a continuous infusion pump that were ineffective. The diagnosis of Covid-19 was confirmed by RT-PCR of nasoarchyeal swab. The patient was transferred from the hospital for evaluation of the need for pacemaker implantation. It was evaluated by the rhythmology team that decided to implement provisional transvenous pacemaker. Fourteen days after the onset of symptoms, a definitive pacemaker was implanted without complications. Received discharge from the hospital the next day asymptomatic and in good general condition.

Conclusion

Cases of rhythm disorders in patients with Covid-19 are more frequent in critically ill patients, especially advanced atrioventricular blocks. There are still no robust data in the literature of the ideal time to implant definitive pacemaker in these cases. Although very few cases have been reported [4,5,6] the cardiologist in charge must never forget the multiple and unexpected cardiac manifestations of the infection by Covid-19 in the course of the disease, being arrhythmia one of them.

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None.

Conflicts of interest

No conflict of interest.

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