

Right Ventricular Outflow Tract Tachycardia in a COVID-19 Patient: A Case Report and Review of the Literature

Background

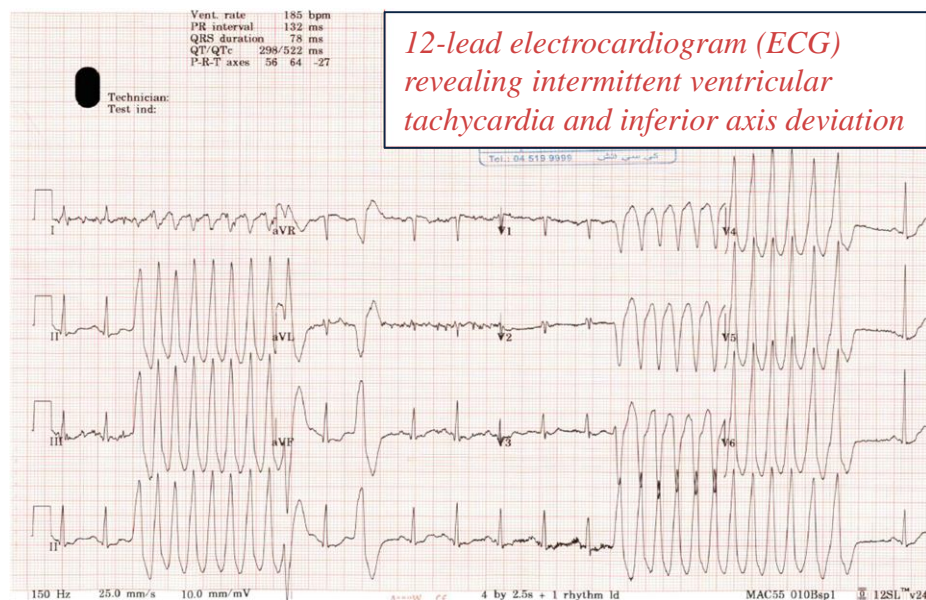
The novel Coronavirus (SARS-CoV2) adversely affects cardiac status and may cause arrhythmias.



The objective of this study is to describe the case of a 41 year-old female presenting to the emergency department with Right ventricular outflow tract (RVOT) ventricular tachycardia; as well as to appraise and compare etiologies proposed in the literature with our case.

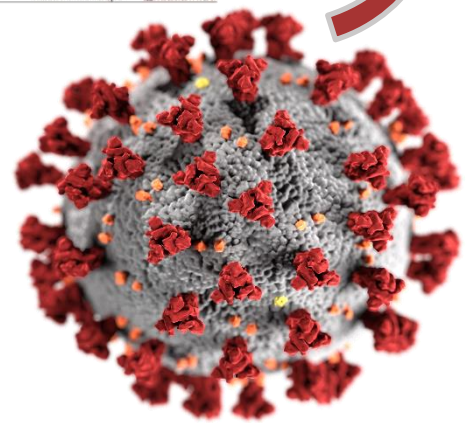
Methods

PubMed Search targeting articles published in peer-reviewed journals that reported the relationship between COVID-19 & Cardiac arrhythmias since the start of the COVID-19 pandemic.



Results

- ❖ 6 papers were included in the qualitative synthesis after a vigorous screening process.
- ❖ The results obtained from these papers proposed different mechanisms by which COVID-19 can cause arrhythmias.
- ❖ Proposed etiologies included: ACE-2 Mediated direct damage of cardiomyocytes, raised serum CRP levels, and raised systemic inflammatory markers and activation of the Ca²⁺/Calmodulin protein kinase I.



Conclusion

- ❖ The lack of associated comorbidities and risk factors in our patient highlights the unique challenge of identifying the clinical sequelae of COVID-19.
- ❖ Proposed pathophysiologies in the literature were not applicable to our case; highlighting the need for clinical monitoring in patients, and the need for further research on the topic.

❖ **Keywords:** 'COVID-19', 'SARS-CoV-2', 'Right Ventricular Outflow Tract Ventricular Tachycardia', 'Ventricular Arrhythmia'

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