

Researchers investigate changes in patterns of heart failure hospitalisation throughout the COVID-19 pandemic

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A team of researchers from the School of Cardiovascular Medicine & Sciences, led by Dr. Antonio Cannata, Daniel Bromage and Theresa McDonagh, have found that patients who were hospitalized with heart failure throughout different waves of the COVID-19 pandemic showed



consistent clinical characteristics and adverse outcomes suggesting that despite different public health messages, the collateral cardiovascular damage of the pandemic may have gone beyond the expected.

The coronavirus pandemic is a tremendous public health emergency, leading to significant collateral cardiovascular disease. COVID-19 can itself result in cardiac complications, but has also been associated with excess mortality among <u>patients</u> with cardiovascular disease regardless of coronavirus infection.

It has been shown that patients admitted with <u>cardiovascular disease</u>, but without concurrent COVID-19, had worse clinical outcomes compared to similar patients in previous years. Our previous analyses suggested that patients who were admitted with <u>heart failure</u>—defined by the inability of the heart to sufficiently pump blood to other organs and tissues—during the first wave of the pandemic were 'sicker'. This may be because patients did not seek help until their heart failure was advanced due to fear of contracting COVID-19 in the hospital. This has implications for the design and delivery of heart failure services. However, it is not known if this finding remained consistent through subsequent waves of the pandemic.

The present research aimed to investigate whether these findings occurred in subsequent waves of the pandemic. The main observation was that patients hospitalized with heart failure had comparable clinical characteristics, risk factors and in-hospital mortality across all waves of the pandemic, although a more rapid optimization of medical therapy was observed in the subsequent waves. This indicates an ongoing need to design heart failure services to ensure the best possible outcomes for patients admitted with heart failure as well as patients who stay at home.

Dr. Irfan Rind, lead author, says that "this research provides further insights into patients with heart failure admitted during the pandemic,



and their outcomes. As COVID-19 has the potential for further surges, attention should be afforded to the prevention of collateral cardiovascular damage, particularly among patients who might be avoiding seeking help for heart failure symptoms."

Going forward, this research will now aim to characterize whether the changes observed at a local level are generalisable on a broader scale, as well as examining if there has been an impact on patients who do not present to hospital.

The research was published in the International Journal of Cardiology.

More information: Irfan A. Rind et al, Patients hospitalised with heart failure across different waves of the COVID-19 pandemic show consistent clinical characteristics and outcomes, *International Journal of Cardiology* (2021). DOI: 10.1016/j.ijcard.2021.12.042

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