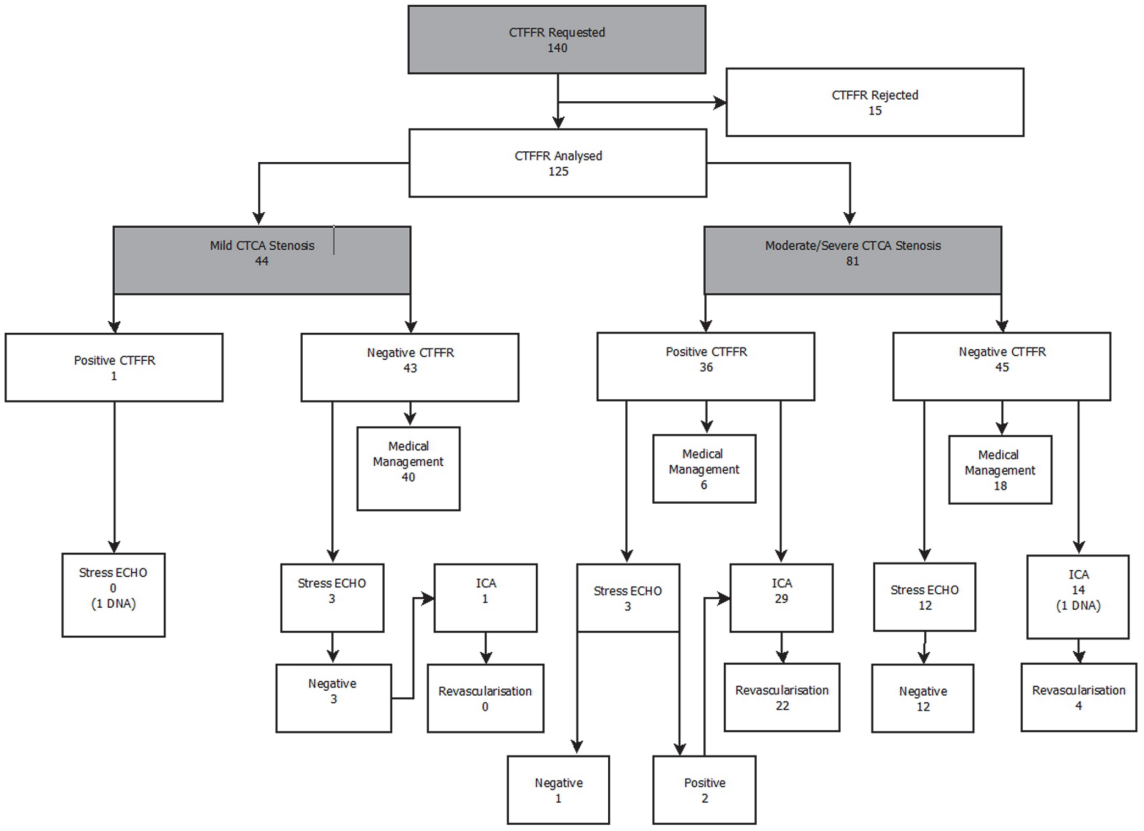

Abstract 175 Figure 1 Downstream investigations and outcomes of patients following CTFFR analysis. CTFFR = CT Fractional Flow Reserve; CTCA = CT Coronary Angiogram; ICA = Invasive Coronary Angiogram

176 COVID-19 DISEASE AND CARDIAC INVOLVEMENT – A LOCAL EXPERIENCE

[1]Muhammad Raheemuddin Ahmed, [2]Samsul Islam, [2]Emily Challinor, [2]Tom Ingram, [2]Arif Khan. [1]*Royal Shrewsbury hospital, Shrewsbury, UK*; [2]*Shrewsbury and Telford NHS Trust*

10.1136/heartjnl-2021-BCS.173

Aims The aim of this review to assess cardiac involvement in patients with severe COVID-19 patients. We review all patients with COVID 19 disease admitted in our trust requiring transthoracic echocardiograms on their clinical indications.

Background Cardiac involvement in COVID-19 disease has been found to be prognostic factor and has been related with higher mortality and morbidity. In a large series with COVID-19 those with heart disease had a fatality rate around 10.5%.[1 2]

Methods All adult patients who were COVID-19 positive on PCR admitted between March 2020 and February 2021, who had an echocardiogram, were identified through our local database. Their demographics, co-morbid, troponin levels and Pro NT-BNP were analysed. All echocardiograms reports which were finalised by the imaging cardiologist were included in our analysis.

Results There were a total of 41 patients who had echocardiograms during their stay in the hospital with COVID-19 disease. Mean age was 70 (range 45-90) years old. There were 70% male and 30% female patients. 12% were diabetic, 49% hypertensive and 40% had previous heart disease. Pulmonary embolism diagnosed in 10% of patients by CT pulmonary angiogram. 56% of patients required high flow oxygen and 21% need mechanical ventilation. Almost all patients had troponin and CRP levels on admission. Mean troponin level 215 and mean CRP levels were 197. Mean D dimer levels 1130, and mean creatinine levels were 138. 92% had evidence of lung involvement in chest X-ray. 13% patients had new evidence of a diagnosis of left ventricular dysfunction on echocardiography. Similarly, 27% had a new diagnosis of right ventricular dysfunction. Mean left ventricular diastolic dimension were 4.6 cm and systolic dimension. 2% had echo diagnosis of left ventricular thrombus echocardiographic studies. Mean PA pressure on echocardiography were 35 mmHg and mean E/A ratio was 1.2. 17% of patients were found to have pericardial effusion but none causing haemodynamic compromise.

Conclusion This data suggests high incidence of right and left ventricular involvement in patients with severe COVID-19 disease. We recommend that all patients with COVID-19 disease admitted to hospital and requiring oxygen should have transthoracic echocardiograms during their admission.

Conflict of Interest none

REFERENCES

1. Zaim S, Chong JH, Sankaranarayanan V, Harky A. COVID-19 and Multiorgan Response. *Curr Probl Cardiol* 2020;**45**(8):100618. doi:10.1016/j.cpcardiol.2020.100618
2. Tomasz J Guzik, Saidi A Mohiddin, Anthony Dimarco, Vimal Patel, Kostas Savvatis, Federica M Marelli-Berg, Meena S Madhur, Maciej Tomaszewski, Pasquale Maffia, Fulvio D'Acquisto, Stuart A Nicklin, Ali J Marian, Ryszard Nosalski, Eleanor C Murray, Bartlomiej Guzik, *et al*. COVID-19 and the cardiovascular system: implications for risk assessment, diagnosis, and treatment options. *Cardiovascular Research*, 1 August 2020;**116**(10):1666–1687