

11483**Cardiac Rehabilitation during COVID-19**

Desira C Doctor, De Gray G Doctor, Fleri Soler J Doctor, Abela M Doctor

Mater Dei Hospital of Malta, Cardiology, Msida, Malta

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Introduction: The global COVID19 pandemic has led to significant morbidity and mortality to millions of cardiac patients across the globe. Inferior clinical standards, modified clinical pathways and limited hospital resources has unfortunately translated to significant premature cardiac deaths. Cardiac rehabilitation has also been hit significantly.

Study Objectives

The aim of this study was to assess the impact of cardiac rehabilitation during COVID-19, comparing the referral, adherence and outcomes with patients admitted a year previously.

Methodology: Patients were divided in two groups. Group 1 were those admitted between March-August 2019 (Pre-COVID). Group 2 included those admitted between March-August 2020 (during COVID). Program completion was defined as adherence to ≥ 6 sessions (Group 1) or ≥ 4 sessions (Group 2). Data was collected from electronic case summaries and cardiac rehabilitation unit medical records. Data was tabulated in SPSS v23. Categorical variables were presented as percentages. Statistical analysis was computed with SPSS v23. A p value of <0.05 was deemed statistically significant.

Results: 710 patients were admitted with a cardiac diagnosis (Group 1 $n=360$, Group 2 $n=350$), mean age 66.71 ± 13.21 years, dominant male population ($n=548$, 77.2%). Both groups had comparable proportions of smoking, hypertension, diabetes and hyperlipidaemia.

The referral rate to cardiac rehabilitation was rather poor in both groups, though better in Group 1 (Group 1 38.3% vs 26.6%, $p=0.001$), partly because of temporary discontinuation of the rehabilitation program at the start of the pandemic. The completion rate was also unfortunately quite low. It was better in Group 2, possibly because of the shorter program duration (Group 1 23.5% vs Group 2 38.7%, $p=0.018$).

The 1 year readmission rate was significantly higher in Group 1 (22.8% vs 15.1%, $p=0.022$), possibly because patients were more open to seek medical advice before the pandemic. The 30 day death rate was comparable in both groups (5.0% vs 5.7%, $p=0.672$). The 1 year mortality was also comparable (Group 1 12.5% vs Group 2 10.6%, $p=0.481$) Cardiac rehabilitation did not impact the 1 year readmission rate, 30 day and 1 year mortality.

Conclusion: The 30 day and 1 year mortality in patients admitted during the first 6 months of the pandemic was comparable to the same timeframe the year before. The 1 year readmission rate was higher in patients admitted before COVID, possibly explained by patients being more inclined to seek medical advice. Referral to cardiac rehabilitation was generally low. Adherence to the program did not impact readmission and mortality.