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Exploring the impact of recent COVID-19 infection on perfusion and functional parameters derived from gated myocardial perfusion imaging in patients undergoing evaluation for coronary artery disease

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Abstract

Objective: This study seeks to evaluate how recent COVID-19 infection affects myocardial perfusion and functional parameters derived from gated myocardial perfusion imaging in patients undergoing evaluation for coronary artery disease. The goal is to enhance our understanding of COVID-19's influence on the cardiovascular system.

Method: Conducted at Farshchian Heart Hospital from 2022 to 2023, this case-control study enrolled patients suspected of coronary artery disease, stratified into two groups: those with confirmed COVID-19 infection within the past 6 months (study group) and those without prior COVID-19 infection (control group). Employing a 2-day protocol, stress testing and gated SPECT MPI were performed. Statistical analysis included descriptive statistics, Chi-square test, Student's t test, and Mann-Whitney U test.

Result: Among the 86 patients included, 43 were in each group. Significantly higher summed stress core and summed difference score values were observed in the study group compared to the control group ($p < 0.05$). In addition, the study group exhibited significantly altered global left ventricular