

Surgical Coronary revascularization in patients with COVID-19; complications and outcomes

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Abstract

Introduction: Coronary artery disease is high-risk comorbidity of COVID-19 infection. Non-elective coronary artery revascularization in COVID-19 patients carries substantial risk. Therefore, it is essential to understand the risk factors and outcomes fully. This study aims to evaluate the prognosis of Coronary Artery Bypass Grafting (CABG) Surgery in patients with COVID-19. **Materials and methods:** This retrospective cohort study assesses 171 patients who underwent urgent and emergent CABG in Tehran Heart Center from March 2020 to September 2021. The patients were allocated to cases and controls based on COVID-19 infection status. Demographic and clinical features, alongside the complications and outcomes, were compared between the two groups. **Results:** According to diagnostic criteria, 62 patients were diagnosed with COVID 19 (Case), and 109 patients had no COVID diagnosis (Control). Regarding the demographics and risk factors, hypertension was more prevalent among patients with COVID 19 (64.5% compared to 43.1% p-value= 0.007). Length of hospital stay, ventilation time, and ICU stay time were significantly higher in patients infected with COVID 19. Post Operative complications, including stroke, atrial fibrillation, pleural effusion, blood transfusion, and Inotrope use, were significantly higher in the case group. Mortality rates were also higher in COVID-19 patients with an Odds ratio of 1.53; however, this difference is not statistically significant (p-value 0.44, 95%CI= 0.50-4.01). **Conclusion:** COVID-19 is associated with a significantly higher hospital stay, ventilation time, and ICU stay. Mortality rates are also higher, albeit insignificantly. Various postoperative complications are also higher with COVID-19.

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