البحث الثالث:

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The potency of intraoperative execution on immediate postoperative outcome in patients with chronic hepatitis C viral infection undergoing mitral valve replacement

Abstract

Background: Prior studies on chronic hepatitis C viral (HCV) infection patients in cardiac surgery were generalized focusing on cirrhotic patients, not on milder forms. Thus, recommendations, surgical indications, and maneuvers were not conclusive. This work aims at illustrating the impact of intraoperative performance of mitral valve replacement (MVR) on the immediate postoperative outcome parameters, recovery, and survival to deduce beneficial recommendations to improve the operative and postoperative results of this high-risk group of patients.

Methods: This study included 144 chronic HCV infection patients presenting with rheumatic mitral valve disease necessitating MVR between April 2012 and March 2019. Group (I) included 108 patients with <45 minutes ischemic time and group (II) included 36 patients with >45 minutes ischemia.

Results: Group (I) who was subjected to statistically significant lower ischemic time showed statistically significant operative and immediate postoperative outcome parameters: total cardiopulmonary bypass (CPB) time, total operative time, smooth weaning off bypass, intraoperative hemodynamic parameters, duration of mechanical ventilation, duration of inotropic support medications in intensive care unit (ICU), postoperative platelets transfusion, postoperative values of transaminases, alkaline phosphatase, total bilirubin and creatinine, incidence of postoperative acute renal failure, time needed to reach target INR, total ICU stay, and total duration of hospital admission. The overall postoperative mortality was 6 (4.16%); 3 (2.77%) deaths in group (I) and 3 (8.33%) deaths in group (II) ($p>0.05$) and the overall hospital complication rate was 32.41% and 38.88% for group (I) and (II) respectively ($p>0.05$).

Conclusions: Efficient intraoperative performance: meticulous quite fast surgical maneuver, proper oxygenation, CPB flow rate, and pressure maintenance, metabolic acidosis and glucose level control, and fresh blood transfusion post-CPB have a great positive impact on the immediate postoperative outcome on this high-risk cohort.

Keywords: hepatitis C, mitral valve, rheumatic diseases, surgery