

Prophylaxis against Reperfusion-Induced Ventricular Fibrillation: A Comparative Study between Amiodarone, Lignocaine and Magnesium Sulphate

Souvic Sarkar*

Department of Anaesthesiology, Medical College, West Bengal, India

*Corresponding author: Dr. Souvic Sarkar, Department of Anaesthesiology, Medical College, West Bengal, India, Tel: +9748949267; E-mail: souvic.sarkar@gmail.com

Abstract

Reperfusion-induced ventricular fibrillation after aortic cross clamp is one of the important complications of open heart surgery. This study aimed to evaluate the efficacy of Amiodarone, Lignocaine and Magnesium sulphate by the way of pump circuit 3-5 minutes before ACC release and observe the haemodynamic alterations in intra-op and post-op period and compare the results in randomized controlled trial. A total of 150 patients undergoing elective open heart surgeries under CPB were evaluated after dividing into 3 groups consisting of 50 patients in each group. Aortic cross clamp time, occurrence of VF, HR, ABP, CVP, and Post operative arrhythmias will be analyzed with statistical tests. There were statistically significant data which depicted that after 10 minutes of releasing ACC the occurrence and persistence of irregular cardiac rhythm was much lower in Group A who received amiodarone 24%(12) than Group L who received lignocaine 44%(22) and then Group M who received magnesium sulphate 54%(27). The association of rhythm at 10 minutes interval vs. group was statically significant (p-value 0.0036). The occurrence of post operative arrhythmia was also lower in the study population of amiodarone (12%) than lignocaine (16%) and magnesium sulphate (24%).

Amiodarone also had a significant role in preventing cardiac arrhythmias in post-operative period. Though internal defibrillation is still considered as the standard technique for treating reperfusion induced cardiac arrhythmias but pharmacological agents like amiodarone when used prophylactically before releasing acc can decrease the incidence of cardiac arrhythmia in the immediate intra-op and even post-op period and reduces the morbidity and mortality of patients undergoing cardiac surgeries.