



Incidence of Ventricular Arrhythmia After Aortic Declamping During Mitral Valve Surgery: Comparison between Bretschneider-HTK and Cold Blood Cardioplegia

Suparit Silarat, Thanaporn Suwongkrua,

Department of Anesthesiology, Faculty of Medicine, Srinagarind Hospital, KhonKaen University, Khon Kaen 40002, Thailand

*Corresponding author, E-mail: por4807062@gmail.com

Oral

Background and objectives: Cold blood multidose cardioplegia and single-dose Bretschneider-HTK are common used during cardiopulmonary bypass for myocardial preservation. No study has compared incidence of ventricular arrhythmia after aortic declamping in elective mitral valve surgery. Thus, the main aim of this study was to find the incidence of ventricular arrhythmia after aortic declamping during mitral valve surgery between two groups.

Methods: 232 consecutive patients undergoing elective isolated mitral valve surgery in Queen Sirikit Heart Center of the Northeast KKU & Srinagarind hospital during 2012-2013, aged 18-65 years, were included in the study. We collected the information from anesthetic and medical records, divided into two groups. 192 patients received cold blood cardioplegia and 40 patients received Bretschneider-HTK. Incidence of ventricular arrhythmia after aortic declamping were

compared between the two groups. We also analyzed defibrillated times, extubated time, ICU time and length of hospital stay.

Results: Baseline values show no group differences. There was a significant ventricular arrhythmia in after release of crossclamping in the HTK group ($p=0.012$). The secondary outcome, we found that no significant difference in extubated time, ICU time and length of hospital stay between cold blood cardioplegia and Bretschneider-HTK.

Conclusions: A single dose of cold blood cardioplegia solution in elective mitral valve surgery occurs ventricular arrhythmia after aortic declamping less than Bretschneider-HTK. Compositions of each cardioplegia and process of delivery may be affected this result.

Keywords: blood cardioplegia, HTK, ventricular arrhythmia

