EP5_118

Warm Blood Cardioplegia Supplemented With MG+

Pavel Bors, Iurie Guzgan, Igor Matcovschi, Vitalie Moscalu, Eugen Virlan,
Gheorghe Manolache, Vlad Morozan, Andrei Ureche, Aurel Batranac, Sergiu Barnaciuc
Cardiac Surgery, Republican Hospital, Moldova

Purpose of Study:

Evaluation of the efficacy of intermittent warm blood cardioplegia supplemented with Mg++ for more lasting and adequate protection of myocardium during cardiac arrest.

Material and Methods:

The study was performed throughout two groups of patients with no significant difference in preoperative clinical conditions, who underwent operations with CPB. In Ist group (control) intermittent cold crystalloid-blood cardioplegia (8-10oC) was delivered every 20 minutes, rectal temperature decreased to 30±1,5oC. In the 2nd group of patients temperature was maintained at 35,5±1,1oC with applying the warm blood cardioplegia according to Calafiore (1995) and Casalino et al. (2008) protocol subsequently modified by us by adding the magnesia sulfate to all portion of cardioplegia. The efficacy of myocardial protection was done using clinical and functional parameters, release of Ck MB and transaminases, length of staying in ICU.

Results:

Besides the convenience of cardioplegic process management, in group II of patients were noted several moments of obvious superiority of warm blood cardioplegy performed at intervals of 25 minutes of ischemia. Related to spontaneous restoration of rhythm the II group had fewer patients whom were applied cardioversions after reperfusion. AV blocks occurred at equal. Number of patients requiring inotropic support in the early days was more representative of the control group. Average length of stay in ICU was 2.5 ± 0.3 for study group to 2.9 ± 0.4 for control group. There was less myocardial damage in study group confirmed by significant differences of CK MB and AST release (P0,05).

Conclusions:

Intermittent warm blood cardioplegia supplemented with Mg + + allows safe extension of the period of ischemia between reperfusions to 25 minutes and has a positive impact on some clinical and byochemical parameters of patients in the immediate postoperative period.