

عنوان مقاله:

Effects of single antegrade hot shot in comparison with no hot shot administration during coronary artery bypass grafting

محل انتشار:

مجله آریا آترواسکلروز، دوره 11، شماره 3 (سال: 1394)

تعداد صفحات اصل مقاله: 5

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خلاصه مقاله:

BACKGROUND: Superior results will be achieved from cardiac surgery by minimizing the effect of ischemia/reperfusion injury during cross-clamping of the aorta. Different cardioplegia solutions have been introduced, but the optimum one is still ambiguous. The aim of this study is to determine the effect of single antegrade hot shot terminal warm blood cardioplegia (TWBC) on patients who had undergone coronary artery bypass grafting (CABG). **METHODS:** In total, ۲۴۸۸ patients who had CABG surgery in Sina Hospital, Isfahan, Iran, from ۲۰۰۳ to ۲۰۱۱ were enrolled in this case-control study. They were divided into two groups, those who received cold cardioplegia only and those who received a hot shot following cold cardioplegia. Demographics, and clinical data, such as; premature atrial contraction (PAC) arrhythmia, diabetes treatment, and left ventricular ejection fraction (EF), were collected and logistic regression analysis was used to analyze the data. **RESULTS:** There were significant differences found between subjects receiving antegrade hot shot based on direct current (DC) shocks, with regard to; female, EF levels, diabetes treatment ($P < 0.05$). Those who did not receive the hot shot and were not diabetic received more DC shock ($P = 0.09$). The prevalence of subjects who did not need DC shock was significantly higher among male subjects who had good EF and acceptable diabetic treatment. Multiple logistic regression showed that PAC arrhythmia did not have a significant effect on receiving DC shock during CABG [0.84 ($0.25, 2.85$), ($P = 0.780$)]. Having poor EF increased the risk of receiving DC shock among subjects by 2.81 [$1.69, 4.69$], ($P \leq 0.001$) ($P < 0.001$). Among the diabetic subjects, receiving insulin decreased the risk of receiving DC shock by 0.54 ($0.29, 0.98$) ($P = 0.042$). **CONCLUSION:** It was concluded that single antegrade hot shot following cold cardioplegia was not particularly effective in the CABG group. TWBC will decrease the need for DC shock

کلمات کلیدی:

Coronary Artery Bypass, Heart Arrest, Induced, Stroke, Mortality, Oxidative Stress, Reperfusion Injury

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