

Comparison of del Nido cardioplegia and blood cardioplegia in isolated coronary artery bypass surgery

Taha Özkara¹, Mehmet Ali Kaygın¹, Servet Ergün¹, Ziya Yıldız¹, Hüsnü Kamil Limandal¹, Mevriye Serpil Diler¹, Hatice Işıl Çüçen Dayı¹, and Özgür Dağ¹

¹Erzurum Bolge Egitim ve Arastirma Hastanesi

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Abstract

Purpose: Our study aimed to examine the impacts of blood cardioplegia (BC) and del Nido cardioplegia (DNC) solutions, which we used in isolated coronary artery bypass grafting, on early mortality and major adverse events. **Material and method:** We retrospectively analyzed 329 consecutive patients who underwent coronary artery bypass grafting (CABG) operations in our clinic between January 2016 and January 2020. Myocardial infarction, reoperation, cardiac tamponade, stroke, renal failure, extracorporeal membrane oxygenator requirement, and cardiopulmonary resuscitation were defined as major adverse events. The group for which del Nido cardioplegia was used was named Group D, and the group for which blood cardioplegia was used was named Group B. Group D consisted of 181 (55%) patients, and Group B consisted of 141 (45%) patients. **Results:** No statistically significant difference was determined between the groups regarding age, weight, body surface area, gender, or EuroSCORE ($p=.615$, $p=.560$, $p=.934$, $p=.365$, $p=.955$, respectively). Although there was no statistically significant difference between the groups in terms of aortic cross-clamp time ($p=.712$), the cardiopulmonary bypass duration was longer in Group B ($p=.001$). Even though the incidence of stroke was higher in Group B ($p=.030$), no statistically significant difference was observed between the groups regarding the total incidence of major adverse events, mortality, mechanical ventilation time, length of stay in the intensive care unit, or length of hospital stay ($p=.153$, $p=.130$, $p=.689$, $p=.710$, $p=.613$, respectively). **Conclusion:** We found no significant difference in MAE, mortality, duration of MV, ICU stay, or hospitalization in the DNC and BC groups. We believe that both solutions can be used safely for cardiac protection in the adult patient population.

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