

Use of del Nido Cardioplegia Solution in Adult Aortic Surgery

Cuneyt Eris¹, mesut engin¹, burak erdolu², and AHMET AS¹

¹Affiliation not available

²Bursa Yüksek İhtisas Eğitim ve Araştırma Hastanesi

March 30, 2022

Abstract

Background:The aim of the present study was to compare the operative and early postoperative results of the use of del Nido Cardioplegia solution(dNCS) with traditional blood cardioplegia(BC) in adult aortic surgery. **Methods:** A retrospective single-center study was performed on 118 patients who underwent aortic surgery with cardiopulmonary bypass (CPB) between January 2016 and June 2020. Patients were divided in to two groups according to the type of cardioplegia solution used during the operation. Cardiac arrest was achieved in Group 1(n:65) with traditional BC and in Group 2(n=53) with dNCS. Operative and postoperative outcomes of the patients were compared between the two groups. **Results:** Patient demographic characteristics were similar between the two groups. dNCS group showed significantly lower aortic cross-clamp (ACC) time(87,5 vs 73,3 min; P=0.001), cardioplegia volume (P<0.001), defibrillation(P=0.006), drainage amount(P=0.026) and inotropic support need (P=0.046).Also dNCS group had significantly lower high sensitive troponin I (hsTnI) values at 6th (P=<0.001) and 24th (P=0.017) hours. Hematocrit levels at hours 6 and 24 were significantly higher in dNCS (P=0.001).Time of intensive care unit stay, duration of extubation and length of hospital stay times were similar in both groups. There was no significant difference in terms of postoperative ejection fraction values(P=0.714). **Conclusion:** Compared with conventional BC, dNCS provided beter myocardial protection with significantly shorter ACC times, reduced need for intraoperative defibrillation, postoperative lower hsTnI levels and comparable early clinical outcomes for adult patients undergoing aortic surgery. dNCS is a safe and efficient alternative to the traditional BC solution in adult cardiac surgery.

Hosted file

mainpage.docx available at <https://authorea.com/users/418379/articles/562644-use-of-del-nido-cardioplegia-solution-in-adult-aortic-surgery>