Turkish Journal of Medical Sciences

Turkish Journal

of

Medical Sciences

The Hemodynamic Responses to Hypothermic and Normothermic Cardiopulmonary Bypass

Rahmi ZEYBEK[1,2]
Tayfun ADANIR[3]
İhsan İŞKESEN[1]
Egemen TÜZÜN[1]

[1]Department of Thoracic and Cardiovascular Surgery Celal Bayar University Faculty of Medicine, Manisa, [2]Department of Thoracic and Cardiovascular Surgery [3]Anesthesiology Atatürk State Hospital, İzmir - TURKEY

Keywords
Authors

medsci@tubitak.gov.tr

Scientific Journals Home Page

Abstract: This prospective randomized clinical study was designed to assess and compare the effects of normothermic and hypothermic nonpulsative cardiopulmonary bypass in patients with mitral valve replacement. Forty patients undergoing elective mitral valve replacement were randomly divided into two groups according to the temperature of perfusion. Group N (15 patients) underwent normothermic cardiopulmonary perfusion and Group H (25 patients) underwent hypothermic cardiopulmonary perfusion. These groups were compared using clinical and electrocardiographic criteria and cardiovascular evaluation parameters. Quantitative data were analyzed using the paired Student t test. While there was a significant increment in heart rate in Group N in relation to preoperative values, there was no change in heart rate in Group H. Increasing values in systemic vascular resistance (SVR) parameters were detected in both groups. Oxygen consumption (VO_2) values decreased in Group N in relation to Group H. There was no significant change in alveolar-arterial O_2 difference (DO_2) values between these two groups. These results indicate that the temperature of cardiopulmonary perfusion had no effect on the immediate postoperative values but did cause an increase in heart rate in the normothermic group.

Key Words: normothermia, cardiopulmonary bypass

Turk J Med Sci 2001; **31**(5): 429-433.
Full text: pdf
Other articles published in the same issue: Turk J Med Sci,vol.31,iss.5.