

Predictive factors for weaning from percutaneous cardiopulmonary support in patients with cardiogenic shock after acute myocardial infarction

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Background: Percutaneous cardiopulmonary support (PCPS) is a powerful device to rescue patients with cardiogenic shock, but its weaning is not always successful. We investigated predictive factors for weaning from PCPS in patients with shock after AMI. Methods and Results: Thirty-one patients (23 men and 8 women,  $73 \pm 10$  y. o.) were on PCPS due to cardiogenic shock after AMI between January 2006 and December 2008. Thirteen patients were successfully weaned from PCPS and survived for more than one month (Group-A), while the other 18 patients completely depended on PCPS (Group-B). There were no differences in patient background, in the driving time of PCPS, or in hemodynamic parameters between two groups. All patients in Group-A were weaned from PCPS within 48 hours, and flow rate of PCPS could be reduced to  $2.2 \pm 0.3$  with stable hemodynamics before weaning. Flow rate of  $2.7 \pm 0.5$  L/min was required to maintain stable condition at 48th hour in Group-B. While two groups showed no differences in blood base excess (BE) at the initiation of PCPS, Group-A showed significant improvement in BE at 12 hour before weaning comparing to Group-B ( $0.15 \pm 1.8$  and  $-3.4 \pm 7.1$ ,  $p < 0.044$  respectively). Conclusions: In the cases succeeding in weaning from PCPS, flow rate could be reduced within 48 hours. BE is a potential predictive factor for successful weaning from PCPS in patients with shock after AMI.