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USE OF RESUSCITATED DONOR HEARTS FOR

TRANSPLANTATION: SAME RESULTS EITHER SIDE OF ATLANTIC OCEAN

To the Editor:

In the era of donor organ shortage, discovering new avenues to increase the number of donor hearts has led to several different strategies including consideration of CPR donor hearts for transplantation. There is a considerable dilemma and reluctance regarding the use for transplant of donor hearts after cardiopulmonary resuscitation (CPR). This dilemma was recently addressed to an extent by 2 independent articles evaluating long-term outcomes of CPR donor hearts, one a single-center study (from Paris, France)¹ and the other based on the United Network of Organ Sharing database (from Louisville, Ky).²

Both the studies included donor data with CPR times as well as peak troponin values and found that presence of CPR, peak troponin values, and duration of CPR did not affect posttransplant graft survival as long as the ejection fraction was preserved or recovered after the resuscitation. Cheng and colleagues¹ showed that the ejection fraction of donor hearts with or without CPR was between 60% and 62% at transplant, which is similar to the results reported by Galeone and colleagues.² Both studies showed that significantly higher peak troponin values in CPR donor hearts did not adversely impact the overall posttransplant survival. Cheng and colleagues¹ have previously demonstrated similar results to the findings of Galeone and colleagues with a national public database, validating the role of preserved ejection fraction CPR donor hearts in post-transplant survival.

Concluding from these articles that all CPR donor hearts have equivalent survival to non-CPR donor hearts may be slightly misleading, because both articles only showed the

use of CPR donor hearts with preserved ejection fraction that were used for transplant and not the donor hearts that were unrecovered after CPR and were not used for transplant. Trivedi and coworkers³ have recently shown that higher ejection fraction (odds ratio, 1.1) and lower troponin (odds ratio, 0.99) are associated with increasing use of donor hearts for transplant, thus appearing to play vital role in the decision-making process of marginal donor heart utilization.³

It is evident from the aforementioned studies that appropriately selected CPR donor hearts with preserved ejection fraction are more likely to be used for transplant and that they are associated with survival equivalent to that seen with non-CPR donor hearts. All the potential donors who have undergone CPR should be carefully evaluated for use of the heart for transplant, but caution should still be used when other potentially adverse factors are present.

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TO USE OR NOT TO USE POST-

CARDIOPULMONARY RESUSCITATION DONOR HEARTS?

Reply to the Editor:

Galeone and colleagues^{1,2} showed that donor hearts resuscitated from cardiac arrest with normalized left ventricular function at procurement could be used as transplants with acceptable results. Moreover, the mean duration of cardiac arrest was 15 minutes and total donor management time before organ procurement lasted almost 4 days, which allowed enough time for left ventricular recovery in many of these potential organ donors. In their letter, Trivedi and colleagues³ stressed that only donors

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