Centers for Disease Control “increased-risk” organ donor: Not so risky?

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The use of CDC high-risk donors in heart transplantation.

Central Message

Use of “increased-risk” donors as categorized by the United Network for Organ Sharing Database according to the CDC criteria does not increase heart transplant mortality.

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Guidelines from the Centers for Disease Control and Prevention (CDC) and Public Health Service categorize organ donors as “increased risk” for disease transmission if donors meet certain criteria thought to increase the risk of undetected human immunodeficiency virus (HIV), hepatitis B virus infection, or hepatitis C virus (HCV) infection.^{1,2} These guidelines were developed to improve the safety of organ transplantation by reducing HIV, hepatitis B virus, and HCV transmission without adversely affecting organ availability.^{2,3} This balance of goals is critical given the significant shortage of donor organs, particularly for heart transplantation.⁴ Since the implementation of recent guidelines, the number of deceased donors classified as CDC “increased risk” has increased to approximately 1 in 5 donors nationally.^{2,5} Although the risk that a CDC high-risk donor is infected with HIV or HCV is increased compared with a non-high-risk donor, the absolute risk is low, particularly with new testing methodology that reduces the window period and identifies the presence of virus earlier after exposure.^{2,6-8} Currently, the United Network for Organ Sharing mandates that centers obtain special informed consent from patients when a CDC high-risk organ is considered for transplantation.⁹ The potential stigma of accepting an “increased-risk” donor and lack of education of physicians and patients regarding the actual risk have led to increased rates of discard of donors from the CDC high-risk donor pool.¹⁰⁻¹² However, data from single-center studies have suggested the use of CDC high-risk donors does not influence heart transplant survival.¹³

In this issue of the *Journal*, Shudo and colleagues¹⁴ investigated the impact on the use of CDC high-risk donors on heart transplant outcomes from the United Network for Organ Sharing database. By using propensity matching, the investigators identified a matched cohort consisting of 6740 CDC high-risk and non-high-risk donors. In a Cox proportional hazards model analysis, the investigators observed that the use of CDC high-risk donors did not adversely influence transplant survival (hazard ratio of

CDC high-risk group vs non-CDC high-risk group, 0.97; 95% confidence interval, 0.87-1.08; $P = .57$). The investigators did observe a higher rate of acute myocardial rejection episodes during hospital stays in the CDC high-risk group, whereas post-transplant pacemaker placements were performed less frequently in the CDC high-risk group.

Although the study by Shudo and colleagues¹⁴ lacks detailed information on rates of seroconversion, outcomes for patients who have seroconverted, and differences in regional use of high-risk donors, the data from this study are reassuring and strongly support the strategy of using the CDC high-risk donor pool for heart transplantation. Given the recent opioid epidemic and the increasing number of donors who are meeting CDC high-risk donor criteria, these data become increasingly relevant.¹⁵ As physicians, we have an obligation to educate our patients on the balance of risk associated with use of the CDC high-risk donor pool. The CDC high-risk donor should not represent a barrier to successful heart transplantation.

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