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Commentary: Just keep spinning

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In October 2018, changes were made to the allocation system used in heart transplantation with the goal of increasing distribution and prioritizing critically ill patients to undergo transplantation sooner. As might be expected, these changes were met with apprehension and questions about whether or not the new system would be successful and what unforeseen consequences might be encountered.

In this issue of the *Journal*, Ganapathi and colleagues¹ have provided an elegant, retrospective analysis comparing one-year time intervals immediately before and after the introduction of the new allocation system. Interestingly, the authors note a significant increase in the use of intra-aortic balloon pumps and mechanical circulatory support before heart transplantation with the new allocation system. This was accompanied by much shorter waitlist times but increased ischemic times and nearly triple the distance in miles traveled for a given case. Despite the aforementioned changes, there was no significant difference in posttransplantation outcomes up to 1 year from the time of surgery.

Although it would be easy to assume that practice patterns have changed to prioritize earlier use of mechanical circulatory support to take advantage of the new allocation system and get patients to heart transplantation sooner, this has not been proven. Surgeons and clinicians have indeed become more facile in the placement and use of mechanical circulatory support devices with time. Similarly, device quality has improved as well. To better understand what is happening, future studies should focus on stratifying patients based on type of mechanical support before heart transplantation and comparing outcomes through that lens.

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The senior author teaching the first author, a resident, the technique of heart transplantation.

CENTRAL MESSAGE

The ultimate impact of the new heart allocation system remains unclear. For now, the pumps will just keep spinning.

As the authors mention, it is possible that the increasing use of intra-aortic balloon pumps, especially in the axillary position, has allowed for adequate cardiac support with less morbidity and more mobility compared with traditional venoarterial extracorporeal membrane oxygenation. Furthermore, continuing advances in percutaneous pump technology, such as the family of Impella devices (Abiomed, Danvers, Mass), likely will play a growing role in the care of pretransplantation patients. The consequences of these developments and the continued evolution of this complex space are particularly interesting, but rapid changes and variability in practice from center to center make analysis difficult.

In addition, research into the new allocation system's financial consequences would be prudent, particularly given the rising costs in the US healthcare system. Such an investigation would need to consider the cost of hospitalization while on the waitlist and the cost of travel associated with organ procurement and delivery, which can vary geographically. Moreover, mechanical circulatory support has obvious associated costs that may or may not outweigh savings in other realms. Until such questions can be answered, the pumps will just keep spinning.

Reference

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