



ISHLT

A Society that Includes Basic Science, the Failing Heart, & Advanced Lung Disease

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Hearts from Hepatitis C patients are safe to transplant, research shows

Findings could vastly increase donor pool

- Research presented at 39th Annual Meeting of the International Society for Heart and Lung Transplantation

ORLANDO, Fla – April 4, 2019 – A growing body of research suggests that heart transplantation from donors with active Hepatitis C (HCV) is safe – *and* that the virus successfully responds to treatment post-transplant.

In the largest single study of its kind, researchers from Vanderbilt University Medical Center in Nashville, Tenn., studied 74 patients who underwent a heart transplant from HCV-exposed donors, finding that transplant patients who developed donor-derived HCV responded well to a standard course of therapy with direct-acting antivirals (DAAs). These findings confirm the initial small study of 13 patients that Vanderbilt previously reported.

The research was presented today by Kelly Schlendorf, M.D., Medical Director of Vanderbilt's Adult Heart Transplant Program, at the 39th Annual Meeting of the International Society for Heart and Lung Transplantation in Orlando. Additional studies evaluating other aspects of care in these patients were presented by Sandip Zalawadiya, MD.

“Utilization of HCV-exposed donors is already having a significant impact in expanding the donor pool for patients awaiting transplant at our center and elsewhere,” said Schlendorf. “For many patients, this may translate into reduced morbidity and mortality. A lot remains to be learned, but so far what we’ve learned is exciting.”

Opioids and Heart Transplants

Two drivers have triggered scientific interest in the viability of using HCV donors: advances in the cure for HCV and the growing number of young people in the U.S. who are dying of opioid

overdoses, many of whom contracted HCV while alive. According to the Center for Disease Control, more than 47,000 people died in the U.S. of an opioid overdose in 2017.

Meanwhile, the number of donations available per year remains about 50 percent of those in need of a heart, according to the United Network for Donor Sharing. The shortage of suitable donors contributes to wait-list mortality – and increased reliance on mechanical circulatory support.

74 Patients Who May Not Have Received a Heart

Between September 2016 and March 2019, 74 patients underwent a heart transplant from HCV-exposed donors at Vanderbilt. All patients were treated with standard immunosuppression and, for those who developed donor-derived HCV infection, with a course of DAAs, a relatively new class of medications that act to target specific steps in the HCV viral life cycle – and with significant success. The HCV treatments used prior to the advent of DAAs couldn't be used in transplant recipients because they were poorly tolerated and associated with multiple drug interactions, organ rejection, and increased mortality. In Vanderbilt's study, patients tolerated treatment well and achieved SVR12 – that is, undetectable viral levels 12 weeks or more after the end of treatment.

Other Hep-C Studies Presented at ISHLT2019

- A study at New York University's Langone Medical Center compared 12 patients who received hearts from HCV donors to 13 with virus-free donor hearts over a 10-month period in 2018. Researchers found there were no differences in early rejection rates and no significant abnormalities of liver functioning in patients with HCV-positive donor hearts. All patients who received hearts from HCV-positive donors contracted the virus, usually within a week of the transplant. However, with treatment the virus cleared, on average, in less than three weeks.
- At Boston University, researchers looked at 111 cardiac transplants over a three-year period, with 23 coming from HCV-positive donors. Researchers compared baseline donor characteristics between HCV-positive and HCV-negative donors, and found short-term outcomes favorable., concluding that "acceptance of HCV-positive donor hearts represents a potential approach to safely expand the available donor pool." The research was presented by K.J. Gaj, at Massachusetts General Hospital in Boston, Massachusetts USA.
- In another study, and the first of its kind, researchers observed that patients who received an HCV-positive heart and post-transplant anti-virus treatments did not experience a higher risk for renal impairment. An integral component of anti-HCV direct-acting antivirals has been linked to RI but, until now, no study has assessed whether the risk for renal impairment was higher in post-transplant patients. The study was presented by S. Zalawadiva, M.S., from the Heart Failure and Transplantation at Vanderbilt University Medical Center in Nashville, Tennessee USA.

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About ISHLT

The International Society for Heart and Lung Transplantation is a not-for-profit,

multidisciplinary professional organization dedicated to improving the care of patients with advanced heart or lung disease through transplantation, mechanical support and innovative therapies. With more than 3,800 members in more than 45 countries, ISHLT is the world's largest organization dedicated to the research, education and advocacy of end-stage heart and lung disease. ISHLT members represent more than 15 different professional disciplines. For more information, visit www.isHLT.org.