

JSPCCS-AHA Joint Session

JSPCCS-AHA Joint Session (III-AHAJS)

Artificial heart and heart transplantation

Chair: Akira Shiose (Kyushu University, Japan)

Chair: Anne Dipchand (Department of Paediatrics, University of Toronto, Canada)

Sun. Jul 11, 2021 9:00 AM - 10:30 AM Track1 (現地会場)

[III-AHAJS-2]The use of Berlin Heart EXCOR as a bridge for transplantation in Japan

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Keywords:heart transplantation, mechanical cardiac support, EXCOR

Since its approval in 2013, the use of EXCOR has increased throughout Japan, with 85 implantations (83 patients) performed to date. Of the 83 patients, 33 patients (39.8%) underwent heart transplantation, 17 patients (20.5%) recovered and explanted, 8 patients (9.6%) died, and 24 patients are on support. The biggest problem in the treatment of severe pediatric heart failure in Japan is the small number of donors for transplantation and the very long time required for the use of mechanical supports. The average time to heart transplant with EXCOR was 391 days and the average support time for the patients who are still on EXCOR is 458 days. These are much longer than that of the United States where average waiting time is a few months. Despite the long support time, the mortality and complication rates are relatively low. In our experience at the Tokyo University Hospital, the most difficult aspect of the long-term management of EXCOR has been the control of infection at the exit site of the cannulas. Infection around the cannula caused deterioration of the general condition and exacerbation of the thrombotic tendency, which made it difficult to control coagulation; conversely, in the absence of infection, coagulation could be managed safely for a relatively long period of time. In addition, right heart failure and aortic regurgitation may become a problem during prolonged management. In the midst of a donor shortage, long-term management is required at each facility, but fundamentally, the number of donors is expected to increase in the future.