LONG-TERM MECHANICAL CIRCULATORY SUPPORT IN PAEDIATRIC PATIENTS: THE BAD OYEHNHAUSEN EXPERIENCE

E. Sandica\textsuperscript{1}, U. Blanz\textsuperscript{1}, L. Ben Mime\textsuperscript{1}, U. Schultz-Kaizler\textsuperscript{1}, G. Kirchner\textsuperscript{1}, E. Zu Knyphausen\textsuperscript{1}, V. Lauenroth\textsuperscript{2}, M. Morshuis\textsuperscript{2}

\textsuperscript{1}Clinic for Pediatric Cardiac Surgery and Congenital Heart Defects, Heart and Diabetes Centre North-Rhine Westfalia, Bad Oeynhausen, Germany; \textsuperscript{2}Clinic for Thoracic and Cardiac Surgery, Heart and Diabetes Centre North-Rhine Westfalia, Bad Oeynhausen, Germany

Objectives: This retrospective study reviews our results regarding the long-term support in paediatric patients using two types of ventricular assist devices between January 2008 and April 2014.

Methods: We implanted the Berlin Heart EXCOR in 29 patients (median weight 13 kg, median age 3.41 years). All patients but one were on inotropes, 8 patients required mechanical ventilation, 5 patients experienced cardiopulmonary resuscitation, 79.3% of the patients received a left ventricular assist device (LVAD). Two patients had a failing Fontan, one patient had a failing ventricle after Glenn procedure. One patient had a mechanical mitral valve prosthesis. The HeartWare system was implanted in 9 patients (median weight 54.9 kg, median age 15.6 years), all patients but one were on inotropes.

Results: In the Berlin Heart group, the mean support time was 120 days, with 3457 days of cardiac support; 62.1% of the patients were transplanted, 20.7% were explanted, 6.9% were on support and 10.3% died on support. Survival rate was 89.7%. Fourteen blood pumps had been changed. There were local signs of infection in 13.8% of the patients and 10.3% had neurological complications but no major neurologic deficit.

In the HeartWare group, the mean support time was 315.4 days, with 2839 days of cardiac support. Four patients had local signs of infection and 3 had neurological complications but no major neurologic deficit. Eight patients have been transplanted, one patient died on support. Survival rate was 88.9%.

Conclusion: After long-term support, excellent survival is possible with a low rate of adverse events.