

## Two-year follow up of children with prenatally diagnosed univentricular heart

Andres S, Yang HC, Gil Pugliese S, Olivetti E, Chernovezky G, Antelo F, Salgado G, Cannizzaro C  
J. P. Garrahan Children's Hospital, Buenos Aires, Argentina

### Objective

To report outcomes of children with prenatally diagnosed univentricular heart followed up and treated at J. P. Garrahan Children's Hospital.

### Methods

We prospectively followed up children with prenatally diagnosed univentricular heart referred to our Fetal Diagnosis and Treatment Program (FDTP) and postnatally admitted to our NICU from 2011 to 2018. We collected neonatal outcomes (median and range), growth (z-score) at 6 months, 1 and 2 years age, morbidity (re-admissions) and Global Development Delay (GDD) (Evaluation Scale: Bayley III – GDD= development coefficient < 70).

### Results

312 fetuses in total were evaluated in our FDTP and 94 were referred to our hospital after delivery. 24/94 (25.5%) were considered to have a functional univentricular heart, that corresponded to 8/24 (33%) Single Ventricle, 5/24 (21%) Hypoplastic Left Heart Syndrome, 5/24 (21%) Pulmonary Atresia, 2/24 (8%) Tricuspid Atresia and 4/24 (17%) others. 1/24 (4%) was lost after discharge and 2/24 (8%) died during follow up. Neonatal outcomes in 21 patients (expressed as median and range) are as follows: Gestational Age at delivery: 39 weeks (35-40), birth weight: 3.110g (2.320-3.880), days of life at admission: 3 (0-14), hospital stay: 54 days (7-157), days of ventilation: 5 (1-24), parenteral nutrition: 4 days (2-37). Survival at 2 years 22/24 (92%). Postnatal growth [given as Z-Score ( $\bar{X} \pm DS$ )] Weight: at birth -0,53 ( $\pm 0,99$ ), at 6 months -1,34 ( $\pm 1,42$ ), at one year -1,05 ( $\pm 1,24$ ), at two years -0,60 ( $\pm 1,27$ ). Height: at birth -1,44 ( $\pm 1,57$ ), at 6months -0,76 ( $\pm 2,27$ ), at one year -1,06 ( $\pm 1,82$ ), at two years -0,75 ( $\pm 1,74$ ). Head circumference: at birth -1 ( $\pm 1,56$ ), at 6 months -0,75 ( $\pm 1,64$ ), at one year -0,5 ( $\pm 1,28$ ), at two years 0 ( $\pm 1,13$ ). Readmissions 6/21 (29%) due to acute respiratory disease, 3/6 (50%) to respiratory syncytial virus. Global Developmental Delay was found in 4/11 (36%) and 2/11 (18%) had borderline development (development coefficient= 70 to 85).

### Conclusion

Growth retardation will be compensated at two years of age in most patients. About one third presented global developmental delay and the same proportion were readmitted due to acute respiratory disease. Survival rate was 92% at 2 years. As a tertiary center in our country, most of the consultations to the FDTP were due to univentricular CHD. These data indicate the need to continue screening for CHD because this is a group that will benefit from prenatal assessment.