Methods: We sent a questionnaire to newborn intensive care units (NICU) in Japan. We analyzed the Developmental Quotient (DQ) evaluated at 3 years old and full scale IQ at 6 years old in VLBWI born from 2000 to 2006. We compared the clinical and developmental data in patients with CHD (CHD group) to 229 VLBWIs without CHD admitted in our NICU (no-CHD group).
Results: We obtained a questionnaire from 12 NICU. There were 45 VLBWIs with CHD (CHD group). The most common lesions were ventricular septal defect (44%), tetralogy of Fallot (16%) and pulmonary valvular stenosis (9%). Of 45 patients, 9 (20%) had chromosomal abnormality, 21 patients (47%) performed surgical repair or catheter interventions. Median periods of hospital stay and intubation were 80 days (43 ~ 215 days) and 7 days (0 ~ 138 days), respectively. There were no significant differences in the periods of hospital stay, intubation periods, and the frequency of severe complications such as chronic lung disease, necrotizing enterocolitis and brain hemorrhage between CHD and no CHD group. In CHD group, the Cognitive-Adaptive (C-A) DQ, Language-Social (L-S) DQ, Postural-Motor (P-M) DQ, and overall DQ were 83 (14 ~ 117), 81 (16 ~ 114), 77 (12 ~ 124), 81 (19 ~ 114), respectively. All DQ scores were below reported normal range. When compared to scores in the no-CHD group, all scores were also lower in the CHD group. However, there were no significant differences of all DQ scores between in CHD (median of overall DQ: 87, P-M DQ: 180, C-A DQ: 87, L-S DQ: 84), and no-CHD patients (median of overall DQ: 86, C-A DQ: 86, L-S DQ: 86, P-M DQ 100, when patients with chromosome anomaly were excluded (All scores, $p > 0.05$). Full scale IQ of patients excluded chromosomal anomaly was not statistically deferent between CHD and no-CHD groups (88 (63-103) vs. 92 (45-129).
Conclusions: The degree of neurocognitive deficits of survivors of VLBWI with CHD is similar to that of no-CHD survivors of VLBWI at the age of 6 years.

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Correlation between cognitive impairment and prognostic parameters in adult patients with congenital heart disease

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Introduction: Cognitive deficits have been observed in patients with congenital heart disease (CHD). This impairment could lead to difficulties in the management of these patients with regards to the understanding of their disease or in adhering to pharmacological treatment and medical advice. Aim of this study is to assess the cognitive and psychological function in adult patients with moderate and great complexity CHD and to attempt to correlate the results with prognostic parameters.
Methods: Thirty consecutive clinical stable patients, mean age 28.1 ±1 1.7 years old, 50% male, with moderate and great complexity congenital heart defects were recruited from a tertiary center. Patients cognitive capacity, psychological and neurohormonal status was assessed with a mini mental examination test (MMSE), Beck depression inventory and Zung depression scale questionnaires and plasma B-type brain natriuretic peptide (BNP) respectively.
Results: All patients were symptomatic (NYHA ≥ II). Mean plasma BNP concentration was 210 ± 300pg/ml. In 26.6% of cases a pathological MMSE score emerged. 33.3% were characterized as having depressive symptoms. A positive correlation between MMSE and age ($p = 0.01$), BNP ($p = 0.02$) and the presence of depressive symptoms ($p = 0.02$) was observed but not between MMSE and NYHA class.
Conclusions: MMSE and BNP plasma levels could be considered simple tests for identifying CHD patients who need special attention and systematic neuropsychological testing and who require a strong doctor/patient interaction for patient's adherence to therapy.

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Psychoemotional status of families of preterm newborns with patent ductus arteriosus in the industrial region of a country with a developing economy

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Introduction: The birth of a very preterm child in the family is a great stress, which is associated with the presence of a multiple congenital abnormalities, including congenital heart disease. Successful nursing management of such children significantly increased the number of congenital heart defects, in particular, patent ductus arteriosus (PDA). PDA in developing countries usually requires surgical treatment due to absence of parenteral forms of non-steroids, which in turn is an additional stress factor.
Methods: We interviewed 112 families of preterm infants. 47 children (group 1) have had surgery of PDA. In 65 families (group 2) the situation did not require surgical treatment in the neonatal period. The survey was conducted using adapted Symptom Checklist-90-revised questionnaires, Family Environmental Scale.
Results: The average score for clusters of questionnaires among mothers was: somatization 1.29 ± 0.46; anxiety 2.06 ±0.52; depression 1.30 ± 0.53, an index of general severity 1.56 ± 0.49. The same parameters for fathers were 0.60 ±0.33, 0.82 ± 0.35, 1.21 ± 0.40, 0.74 ± 0.44, respectively, and were significantly lower than that of mothers. In group 1, the average index of total severity in the parents was 1.95 ± 0.62, in the second 1.36 ±0.43 ($p < 0.01$).
Conclusions: The presence of the PDA which required surgical treatment was the main stress factor. The level of anxiety was higher in mothers than in fathers. The level of fathers' distress affected on the relationship in the family significantly more often in group 1. All parents would prefer the availability of professional psychological assistance. Certification of intravenous NSAIDs would reduce surgical management of PDA.

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Parental anxiety and comprehension before cardiac intervention in a population of children with congenital heart disease (CHD): contributing factors and consequences

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Introduction: The medical information (diagnosis and treatment) around congenital heart disease can induce major stress to the parents. Visual analog scales have been validated to assess anxiety in the adult population. The aim of this study was to analyze parental anxiety using a Visual analog scales and to explore the influencing factors, in particular the level of understanding of the disease and its support.
Methods: Prospective transversal study lead from January 2017 to May 2017 in the pediatric cardiology and intensive care unit of -La