

JCK Oral

JCK Oral 6 (II-JCKO6)

Long-term Outcome/ Heart Failure/Arrhythmia

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Sat. Jul 8, 2017 5:10 PM - 6:00 PM ROOM 3 (Exhibition and Event Hall Room 3)

5:10 PM - 6:00 PM

[II-JCKO6-01]Assessment of limited athletic participation school age after operation for severe congenital heart disease based on cardiovascular disease screening

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Background: Mortality in severe congenital heart disease (SCHD) has dramatically decreased, and only few reports evaluated the school life activities (SLAs) of children with SCHD. Purpose: This study aimed to evaluate the SLAs of students with SCHD. Subjects and Methods: Based on information from the school-based echocardiographic screening program at Shizuoka prefecture, we retrospectively reviewed the SLAs of 58 students, including 39 with heterotaxy syndrome (Hetero) and 19 with hypoplastic left heart syndrome (HLHS), who received total cavopulmonary connection (TCPC). The limited athletic (LA) and non-limited athletic (non-LA) criteria were management levels A to D and E, respectively. We compared the clinical outcomes related to hemodynamic factors between the LA and non-LA students. Results: Of the participants, 19 were LA and 39 were non-LA students. No significant differences in fetal diagnosis and HLHS incidence were found. TCPC procedures tended to be performed earlier after birth. The LA students had undergone an increasing number of palliation procedures before achieving TCPC, increasing brain natriuretic peptide (BNP) levels, and decreasing SaO₂ after TCPC. Receiver-operating characteristic curve revealed that >34.3 pg/ml after TCPC predicted LA SLAs. Conclusion: High BNP level and low SaO₂ after TCPC are appropriate predictive markers of LA SLAs. Consensus should be established regarding the safety of the practice, optimal training regimen, and appropriate rehabilitation program to achieve non-LA SLAs.