Physical Activity in Patients with Congenital Heart Disease. Evaluation of Subjective and Objective Data on Activity and Exercise Tolerance

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Introduction: Data concerning physical activity in patients with CHD is scarce. Comparative evaluation of self-reported physical activity and cardiopulmonary exercise tolerance measurements at our patient population was performed.

Methods: In 2014 199 patients, median age 26 (8-69) years, 102 female (51%), were examined by cardiopulmonary exercise testing (CPET) during their routine check-up at our outpatient department. 173 patients reached physical capacity, sufficient for analysis. Predicted VO2max was calculated accordingly to Cooper (1984, 2000). A questionnaire on physical activity was filled out by the patients. Results were compared with 2 studies on healthy German children (KiGGS n=17,000) and adults (DEGS1 n=8152).

Results: 95 patients (52.2%) answered to be active in sports. 32% of the active and 31% of the non-active patients showed interest in a CHD - sports group, supervised by a physician.

Patients with CHD were found to be less active in sports then healthy subjects and this gap was larger in male patients. The largest differences were seen in women 18-29 years (30% active with CHD vs. 74% active healthy women) and men 30-39 years (40% active with CHD vs. 72% active healthy men).

In median patients stated to be physically active 3 hours per week. Time spent with physical activity correlated with VO2max (r=0.316 p: 0.01).

Reasons stated for absence of activity in sports: not interested (31%), lack of time (12%), requirements too high (28%). Of all school children 9% stated that their parents did not approve of physical activity. The teacher was in no case given as a reason not to participate in school sports.

Self-reported fitness correlated to VO2max: very good: 91%, good: 84%, moderate: 78%, not very good: 66%, not good at all: 74%.

Conclusions: Physical activity in patients with CHD should be encouraged more actively since lack of time and interest are main reasons. CHD- sport groups should be established to provide adequate supervision and level of physical requirements to achieve a higher percentage of physical activity in the CHD population.