ACC.14
TCT@ACC-i2 | innovation in intervention

A574
JACC April 1, 2014
Volume 63, Issue 12

Congenital Heart Disease

SPORTS PARTICIPATION AND QUALITY OF LIFE IN ADOLESCENTS AND YOUNG ADULTS WITH CONGENITAL HEART DISEASE (SQUAD STUDY)

Poster Contributions
Hall C
Sunday, March 30, 2014, 9:45 a.m.-10:30 a.m.

Session Title: Pediatric Electrophysiology and Exercise
Abstract Category: 10. Congenital Heart Disease: Pediatric
Presentation Number: 1192-274

Authors: *Peter N. Dean, Catherine W. Gillespie, Elizabeth Greene, Gail Pearson, Adelaide S. Robb, Charles Berul, Jonathan Kaltman, Children's National Health System, Washington, DC, USA*

Background: Adolescents and young adults with congenital heart disease (CHD) are often restricted from physical activity and sports participation. Our goal was to determine the amount of physical activity, type of sports participation, reasons for sports restrictions and quality of life (QoL) in a cohort of patients with CHD.

Methods: Individuals with CHD aged 13-30 years were recruited at outpatient visits or by mailings to participate in this cross-sectional study. Patients completed a questionnaire addressing physical activity, sports participation, sports restrictions and QoL (PedsQLTM). We interrogated the medical record for diagnosis, interventions, comorbid medical conditions, body mass index (BMI) and exercise stress test results (when available). Data were analyzed using Chi-square tests and multivariable linear regression.

Results: Of the 180 patients enrolled (mean age 19±5 years; 53% female), 32% have mild CHD, 40% have moderate CHD and 28% have severe CHD. In the cohort, 52% participate in competitive sports, 24% recreational sports and 24% no sports. Patients with moderate or severe CHD are less likely to participate in competitive sports than patients with mild CHD ($p = 0.01$). Of the patients with severe CHD, 29% participate in competitive sports that would be restricted by published guidelines (36th Bethesda Conference). After controlling for age, sex, CHD severity and presence of comorbidities, participation in competitive sports and increased frequency of physical activity are independently associated with a higher QoL ($p=0.03$ and $p=0.007$, respectively). In an identical model, participation in competitive sports and frequency of physical activity are associated with higher maximum predicted VO2 ($n = 38$; $p = 0.003$ and 0.03) and lower BMI ($p = 0.006$ and 0.02). Patients who report any type of restrictions (37% of patients) have marginally lower QoL ($p = 0.08$). Of the patient reported restrictions, 56% are due to physician recommendations, 24% to fear, 11% to pain and 9% to parent.

Conclusion: In a cohort of young CHD patients, participation in competitive sports and increased frequency of physical activity are associated with higher QoL, higher maximum predicted VO2 and lower BMI.