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CONGENITAL HEART DISEASE AND PEDIATRIC CARDIOLOGY

SESSION TITLE: EXERCISE AND PHYSICAL ACTIVITY IN PEDIATRICS AND CONGENITAL HEART DISEASE

Abstract 14500: Physical Activity in Individuals With the Long Qt Syndrome: Baseline Data From the Lifestyle and Exercise in Long Qt Study (live Lqts)

Rachel J Lampert, Sharlene Day, Bradley S Marino, Matthew Burg, Barbara Ainsworth, Maite Tome, Susan P Etheridge, Dominic J Abrams, Peter F Aziz, Marina Cerrone, Richard J Czosek, ... See all authors

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Abstract

Introduction: The safety of vigorous exercise for individuals with appropriately-treated LQTS remains unproven, and physical activity practices in this population have not been described.

Methods: LIVE-LQTS prospectively enrolled individuals age 8-60 years with overt LQTS or gene mutation carriers. Participants (or parents, for children) answered surveys describing activity patterns. Vigorous exercise was defined as > 6 METS for > 60 hours per year. Clinical and demographic data were derived from medical record review.

Results: Among 1554 participants, 804 (52%) reported exercising vigorously, 473 of these competitively, 577 (37%) exercising at moderate, and 173 (11%) at low levels. Seven percent of those working describe jobs more active than walking, including 10 in protective services and 19 in sports/coaching. Over 90% are genotype positive, 57% are phenotype positive at rest and an additional 16% have exercise-induced QT prolongation. Forty four percent have had documented ventricular arrhythmias or syncope. Eighty-four percent are appropriately treated with either beta-blockers, ICD, and/or sympathectomy, although among beta-blocked patients, only 60% are on the

most effective agents. Among adults, BMI was significantly lower among the vigorous exercisers.

Conclusion: While the high percentage of vigorous exercisers seen in this study may not represent all patients with LQTS due to self-selection for study participation, many patients with LQTS are engaged in vigorous exercise or competitive athletics. Prospective follow up of this cohort is ongoing and will determine safety of vigorous exercise through comparison of arrhythmic outcomes in vigorous exercisers vs moderate/low level exercisers.