



Research Week 2020

Sports Participation and Activity Practices in Pediatric Patients with Bicuspid Aortic Valves

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Keywords

bicuspid aortic valve, activity, sports, restrictions, pediatric cardiology

Abstract

Background

Children with a bicuspid aortic valve (BAV) are at risk of developing sedentary lifestyles and cardiovascular disease in adulthood. All children should participate in daily physical activity, and competitive sports are an important avenue for this. In 2015, the American Heart Association (AHA) released guidelines for competitive sports participation in patients with heart disease. Thus far, there have been no studies examining provider adherence to current guidelines in comparison to actual patient practices, or to evaluate how competitive sport restrictions affect activity levels.

Objective

To determine (1) are pediatric cardiology providers following AHA guidelines regarding competitive sports restriction, (2) are patient practices in keeping with AHA guidelines, and (3) are children restricted from competitive sports less active than those who are not restricted.

Methods

This is a retrospective cohort study of otherwise healthy youths aged 8 to 18 years with an isolated BAV who were seen in OHSU pediatric cardiology clinic between January 1st 2015 and October 1st 2019. Charts were reviewed for last cardiology visit and concurrent echocardiogram. Parents participated in a phone survey to determine current level of activity and participation in sports. Patient characteristics were summarized using counts, percentages, and means. Means were compared using a t-test statistic.

Results

Preliminary analysis of the 16 patients in our pilot study demonstrated that only 50% of provider recommendations agreed with AHA guidelines. In practice, 56% of patients complied with AHA. Additionally, children restricted from competitive sports were found to be less active compared to children who were not restricted ($p < 0.05$).

Conclusion

Only half of the pediatric cardiology providers in our study followed the AHA guidelines regarding competitive sports restriction. Our initial data suggests that children who are restricted from competitive sports participation are more likely to be less active.

