Research Days

May 3rd, 11:30 AM - 1:30 PM

Assessment of Dental Care in Children with Congenital Heart Disease

Mollie Walton

Assessment of Dental Care in Children with Congenital Heart Disease

Submitting/Presenting Author (must be a trainee): Mollie Walton, MD
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☐Medical Student
☐Resident/Psychology Intern (≤ 1 month of dedicated research time)
☐Resident/Ph.D/post graduate (> 1 month of dedicated research time)
☐ **Fellow**

Primary Mentor (one name only): Christopher Bugnitz, MD
Other authors/contributors involved in project: N/A

IRB Number: 1585371-2

Describe role of Submitting/Presenting Trainee in this project (limit 150 words):
Primary investigator, including generation of proposal, research (chart review), and abstract creation.

Background, Objectives/Goal, Methods/Design, Results, Conclusions limited to 500 words

Background:
The incidence of infective endocarditis (IE) is significantly higher in patients with congenital heart disease (CHD) compared to the general population. Studies have investigated the incidence of IE in adults with CHD to identify the factors that contribute to the development of IE. One such factor is suboptimal oral health. Several studies have shown that children with CHD have higher levels of untreated oral disease as compared to children without CHD.

Objectives/Goal:
Identify factors that may affect compliance with routine dental care, including: age, sex, severity of CHD, repair/palliation, and qualification for prophylactic antibiotics.

Methods/Design:
A retrospective chart review was performed at a small to medium sized hospital-based pediatric cardiology practice in southwest Ohio to identify factors that may affect routine dental care compliance in patients with CHD. The data set includes 234 patients seen from January 1, 2019 through December 1, 2019. Inclusion criteria included age 12 months to 21 years, with unrepaired, repaired, or palliated structural heart disease. Information regarding patient characteristics and routine dental care was obtained from a clinic intake questionnaire. Data was analyzed using descriptive statistics, including two-sample t-test, Chi-square test, and odds ratio.

Results:

65.8% of CHD patients reported regular dental care. After controlling for the repaired/palliated variable, the odds of regular dental care increase 1.32 times for every year increase in age, in a statistically significant way (p<0.001). After controlling for age, the odds of receiving regular dental care are not significantly different between patients who are unrepaired and patients who are repaired/palliated. The other categorical variables did not demonstrate an association with dental care compliance in a statistically significant manner.

Conclusions:

This CHD patient population appears to be less compliant with routine dental care, as compared to the general population (84.9%). The odds of receiving routine dental care, and presumably improved oral health, increase with age. This leaves the younger population, which remains at risk for development of IE, vulnerable. Several factors may be at play, and future research is necessary to investigate the barriers to care that may exist. Improved oral health and education regarding the importance of oral health and routine dental care would likely lessen the risk of IE in CHD patients.