An eleven-year review of pediatric echocardiogram reports in Kumasi, Ghana
Samuel Blay Nguah MD,1,2 Sheila Agyeiwaa Owusu MD,2,3 Haruna Mahama MD,2,3 Erica Abrafi RN2
1Kwame Nkrumah University of Science and Technology, Kumasi, Ghana
2Komfo Anokye Teaching Hospital, Kumasi, Ghana
3Tamale Teaching Hospital, Tamale, Ghana

ABSTRACT INFO
CONFERENCE TITLE
Directorate of Child Health-Komfo Anokye Teaching Hospital Research Dissemination Conference
ABSTRACT TRACK
Cardiology
ABSTRACT TYPE
Original research/clinical audit
PRESENTATION MODE
Poster
ARTICLE HISTORY:
Received 15-December-2021
Accepted 15-Jan-2022
Available online 26-Jan-2022
KEYWORDS:
Echocardiogram, KATH; Ghana

Background
Pediatric heart diseases (PHDs), comprising congenital heart diseases (CHDs) and acquired heart diseases (AHDs) are significant contributors to non-communicable diseases in children. CHDs alone occur in 0.8-1.0% live births globally. Data on echocardiogram diagnosed PHDs in Ghana however is lacking. We set out to describe the echocardiogram diagnosed prevalence of the various PHDs, their age profile and change in trends over an eleven-year period in children less than sixteen years seen in Kumasi.

Methods
We retrieved archived first echocardiogram scan reports from January 2010 through December 2020, and extracted the diagnosis, scan date and sex of the patients. PHDs were categorized into CHDs and AHDs and proportions of the top five reported respectively. Observed trends in proportion of types of PHDs and age at first diagnosis were computed. Data was collected using Microsoft® Excel and analyzed with R statistical software.

Results
PHDs were present in 49.9% (2474/4962) of the scans done with 51.5% (95%CI: 49.5-53.5) being males and 93.3% CHDs. The number of different diagnoses were 3344 as some of the patients had multiple diagnosis. Of these, the top five CHDs were Ventricular Septal Defect (699, 20.9%), Atrial Septal Defect (634, 19.0%), Patent Ductus Arteriosus (576, 17.2%), Tetralogy of Fallot (318, 9.5%) and Atrio-Ventricular Canal Defect (222, 6.6%). That for AHDs were Rheumatic Heart Disease (61, 1.8%), Dilated Cardiomyopathy (46, 1.4%), pericardial effusion (29, 0.9%), Hypertrophic Cardiomyopathy (26, 0.9%) and Infective Endocarditis (14, 0.4%). Proportion of various PHDs stayed constant over the years (p=0.129). The median (IQR) age in months for acyanotic CHDs (6, 1.5-18), cyanotic CHDs (15.0, 4.0-36.0) and AHDs (72.0, 19.0-120) were significantly different (p<0.001). Age at diagnosis reduced by 0.46 months per year, (95%CI: 0.01 to 0.92, p=0.046) over the 11-year period.

Conclusion
Prevalence of CHDs and AHD are similar to other reports worldwide and has remained largely unchanged over the 11-year period. Age at first diagnosis however is reducing for all PHDs.