

## A Short Reflection on the Congenital Heart Disease of African Children

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### INTRODUCTION

Congenital heart diseases (CHD) are serious anomalies making it one of the most common classes of birth defect that account for nearly one-third of all major congenital anomalies and are defined as abnormalities in the cardiovascular structure or function that are present at birth, although can be diagnosed later [1,2].

There is no evidence for differences in prevalence in different countries or times. In an analysis of 62 studies published after 1955, Hoffman et al found that although the prevalence of CHD varied from 4 to 50 in 1000 live births, the differences could be attributed to the differences in relative frequency of ventricular septal defect of the different studies cohorts [2].

In African populations, the epidemiological data are still scarce. There are some African studies released in countries like Nigeria, South Africa, Mozambique and Egypt which showed prevalence around 2 to 12% [3-11]. The pediatric population constitutes a large portion of the population in African countries, the lack of correction of the CHD due to the absence of heart surgery, certainly leads an accumulation of large numbers of children and adults with non operated CHD [4,11].

In Angola, there is no study about the prevalence of CHD. Although, there are some in-hospital studies that give an idea about the spectrum of CHD [10,11]. In one of this study, with a 1267 children, showed that only 58% of the children have the diagnose under the age of one year. The ventricular septal defect and tetralogy of Fallot were the most frequent cyanotic and acyanotic CHD with 30% and 8.6% respectively. It was observed that have been increased the number of children diagnosed with CHD over the past ten year apparently due to increased diagnostic facilities and more trained pediatric cardiologists in the country [12,13].

Advances in pediatric cardiac care have resulted in an increase

ing number of patients with CHD being observed in same African reports [5,6,8]. With the recent wide-implementation of fetal cardiac diagnosis, the prevalence and spectrum of CHD at live birth may also be modified in Nigeria, Angola and Mozambique for intense [4,5,11].

Postnatal echocardiographic diagnosis for minimal cardiac symptoms, such as a murmur only or even as a means of newborn screening may increase the detection rate of mild types of CHD, such as small ventricular septal defect, patent ductus arteriosus or secundum atrial septal defect [5].

Early detection of these cardiac diseases in children is important in order to prevent serious complications and to institute endocarditis prevention. Africa this is so far from this reality, medical assistance is scarce, and majority of these children never have been seen by a medical doctor since their birth.

Poor diagnostic tools, poor referral systems and lack of skilled personnel justify the increased mortality rates in African children with CHD [14].

In 2011 the Angolan Ministry of Health installed a tertiary pediatric cardiac center in Luanda at Clinica Girassol as a result of a joint Angolan-Portuguese venture. Organization of a patient referral system, political commitment of Angolan and Portuguese professionals is resulting in no waiting list for children with CHD requiring surgical correction in the capital. Referrals, originally from secondary centers in Luanda were progressively extended to provincial capitals. Contrary to the visiting team model, whereby expatriate teams visit the country for a limited period of time (1-2 weeks, 3-4 missions/year) we created a collaborative program between an Angolan team and a Portuguese multidisciplinary permanent rotating team of surgeons, anesthesiologists, pediatric cardiologists, nurses and perfusionists. Complex cases, particularly in neonates and young infants are performed by Portuguese surgeons while all

other cases are performed by an Angolan surgeon.

This centre can help to solve not only the Angolan children with CHD, but also from the closed countries. In other hand, a new population of patients surgically treated is generated and it is very important the investment in the training of national professionals, a heart team, for solving future problems as re-operation, follow-up of these patients and continuity of the project. In conclusion, the CHD remains a serious problem in Africa and more investment needs.

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