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PANPACH

The First Independent Paediatric Workshop of the Pan African Network for Paediatric and Congenital Heart (PANPACH)

The Pan-African Society of Cardiology (PASCAR) was founded in 1981 in Badagry, Nigeria. The Society consists of physicians and cardiac societies from across Africa involved in the prevention and treatment of cardiovascular disease and is concerned with the lack of progress in the diagnosis and effective treatment of cardiovascular disease across Africa. It consists of African Cardiac Societies in the five regions of Africa: North, South, East, West, and Central with more than 20 countries currently involved.

PASCAR has four major aims:

- To prevent and treat cardiovascular disease in Africa
- To educate and train African healthcare professionals in cardiovascular disease¹
- To educate laypersons about heart disease
- To invest in cardiovascular research²

To achieve these aims, there are nine task-forces, leading the scientific and research arms of PASCAR. These are:

- Sudden Cardiac Death
- Rheumatic Heart Disease
- Pan African Network for Paediatric and Congenital Heart (PANPACH)
- Pacing and electrophysiology
- Interventions
- Imaging
- Hypertension
- Heart Failure
- Cardiac Surgery

These taskforces have been instrumental in scientific meetings, in developing policy documents,³ conducting research⁴ and implementing new African-focused guidelines.⁵

The most recent PASCAR congress was held from 7 to 11 October 2017 in conjunction with the Sudan Heart Society and the Pan-African Course on Interventional Cardiology (PAFCIC) in Khartoum, Sudan. It was preceded by several workshops and ended with the African Summit on Circulatory Disease, hosted by the World Heart Federation.



PANPACH held their first independent workshop at this meeting and herewith, a report of that event.

PANPACH consists of paediatric cardiologists, cardiac surgeons, and paediatricians or general physicians with an interest in cardiology. Like PASCAR, PANPACH has four major related aims: first, to prevent and treat children's heart disease in Africa; second, to educate and train African healthcare professionals about children's heart disease; third, to educate laypersons about children's heart disease; and fourth, to invest in children's heart disease research. An additional aim is to form a network of persons who are passionate about managing and controlling children's heart disease in Africa.

The current executive consists of Chairperson Prof Liesl Zühlke, South Africa, Secretary Dr John Musuku, Zambia, Vice Chair Southern Africa Prof Ana Mocumbi, Mozambique, East Africa, Prof Christine Yuk-Jowi, Kenya, West Africa, Prof Ekanem Ekure, Nigeria and North Africa, Prof Sulafa Ali, Sudan. The Treasurer is Prof Wilson Sadoh from Nigeria, Immediate-Past President Prof Samuel Omokhodion and Registry Committee Profs Ekanem Ekure and Wilson Sadoh. For the first time this year, PANPACH hosted a parallel pre-congress workshop and received over 25 abstracts from all the PASCAR regions. Due to difficulties for travel, 11 papers were finally presented in person. The workshop was attended by around 75 physicians including paediatric cardiologists, fellows and residents.



Blue and White Niles confluence, Khartoum



Local and International Faculty L to R, Prof Sulafa Ali, Sudan, Dr Hassan Awadalla, Sudan, Dr Nana Yao, Ghana, Prof Liesl Zühlke, South Africa, Dr Suleiman Lubega, Uganda, Dr Noha Karadawi, Sudan, Dr Intisar Ibrahim, Sudan



Opening ceremony, L to R, Dr Kemi Tibazarwa, Tanzania, Profs Mpiko Nsekhe and Mark Engel, South Africa

The first session focused on abstracts from Sudan. Prof Sulafa Ali presented the paediatric cardiology program established in Sudan in 2004 and described the program's intersecting elements of clinical, echocardiography and cardiac catheterization services and training together with active participation in research. An accredited Fellowship Program began in 2012 and to date five fellows have graduated most of whom have left to work in other countries and regions. Prof Ali, ever the optimist, also described this as a success, if not for Sudan, at least for the region and the world.

There were two outstanding fellow presentations. The first from Dr Hassan Awadalla, who presented a paper on 'The Sudan Hand held echocardiography Project: A tool for surveillance and control of Rheumatic Heart Disease (RHD)'. Particularly interesting in this paper, was new evidence of a very high incidence of latent RHD in the Kordofan and White Nile regions of Sudan, which is further confirmed by the high number of cases from these areas in hospital registers. In addition, he presented the results of over 2700 adults screened for asymptomatic RHD.

Dr Intisar Ibrahim presented the work of colleagues' Dr Tajudeen Bushari and Prof Sulafa Ali in examining the validation of the accuracy of hand-held echocardiography for the diagnosis of congenital heart disease. This was an example of 'research for life' hand-held echocardiography devices donated for RHD surveillance and screening now being used for the diagnosis of congenital heart disease, using a modified segmental approach, as echo machines are a scarce resource in Sudan, and demonstrating excellent overall diagnostic accuracy.

The founder of Paediatric Cardiology in Sudan, Prof Moneim Elseed gave the participants a fascinating overview of the beginnings of paediatric cardiology in Sudan, discussed some of the challenges faced by the previous generation and the approaches taken and addressed the current needs, gaps and opportunities. Key concerns are the lack of paediatric cardiac surgeons (only one in Sudan) as well as few anaesthetists and intensivists trained in paediatrics.

The following sessions featured two papers from Uganda and one from Ghana. Dr Suleiman Lubega, Head of the Division of Paediatric



Workshop attendees, right foreground, Prof Moneim Elseed, founder of modern paediatric Cardiology in Sudan

Cardiology in Kampala, Uganda, outlined the strategy involved in the development of the paediatric program at the Uganda Heart Institute (UHI). The UHI has recently been awarded a unique independent status within Uganda and has over the past decade been able to develop a local surgical program with 100 independent cases planned for 2017. Integrated in the system is teaching, telemedicine and research. Dr Nana Yao is the sole paediatric cardiologist in Ghana. She is a Ghanaian but raised in Dublin and trained in London and Birmingham. After a chance meeting with Dr Frank Edwin, a cardiac surgeon trained in South Africa and working in Accra, Dr Yao decided to relocate to Ghana and now is head of the unit in Accra. As the sole practitioner, she has significant challenges but has developed several cardiac clinics, and oversees the paediatric surgical cardiac patients operated on in Ghana.

The final presentation in this session was a review of the Paediatric Cardiology program in Gulu, Uganda, presented by Dr Lubega on

behalf of the head of the unit, Dr Twalib Aliku. Dr Lubega discussed the echocardiographic characteristics of patients seen in Gulu and the referral process between Gulu and Kampala, Uganda. A total of 299 children were diagnosed with CHD during the period, mean age of patients with CHD was 3.1 years, 59.2% female. Already at initial evaluation, 75% (224/299) of the children needed definitive intervention. Dr Aliku was the first paediatric cardiologist to be trained by the Uganda Heart Institute. He completed a Master of Medicine in Paediatrics and Child Health at Makerere University, followed by fellowships in India and the US. This session outlined the establishment of new units in Africa and the brisk discussion that followed examined challenges, learning lessons and new innovative approaches to growth and maintenance of these fledgling units.



The final session commenced with Prof Toure Ali, Niger presenting a paper on the 'Screening of cardiovascular diseases in primary schools in Niamey (Niger–West Africa): A prospective cross-sectional survey in 5236 pupils'. This study reported on a surveillance study screening for heart disease and hypertension in schools in Niger. There were 78 cases of heart diseases (14.9%), most frequent was RHD (48 cases, 9.2%), congenital heart disease (8 cases, 1.5%)

and severe anaemia (22 cases, 4.2%). The prevalence of high blood pressure was 7.2% and metabolic syndrome 14.6%. These data suggest that preventive measures should be taken to prevent cardiovascular disease with educational and nutritional programs including nurses, school educators and families at community level.

Prof Liesl Zühlke from South Africa then presented the findings of a retrospective study of 109 Grown-Up Congenital Heart Disease (GUCH) patients operated in Cape Town, South Africa.⁶ GUCH is a rapidly growing population in Africa and needs a comprehensive strategy and multi-disciplinary team approach. Although Group A Streptococcus (GAS) is a significant cause of morbidity and mortality on the global scale especially with the sequelae of RHD, the burden of GAS disease in Africa is not known.

Prof Mark Engel from Cape Town presented the rationale and design of the Afrostrep registry—the registry will enrol both passive and active surveillance of GAS and is attempting to inform current prevention efforts including vaccine development.⁷

In the final presentation, Prof Zühlke presented the Protea Registry (Partnerships in Congenital Heart disease in Africa) a new initiative to build a comprehensive congenital heart disease registry in Africa. Commencing in South Africa, and in partnership with Manchester University and funded by a Medical Research Council-UK seed grant, the registry aims to characterize CHD patients (children and adults), in Cape Town in the first instance, develop a comprehensive clinical, genotypic/phenotypic, demographic and

outcomes database, and establish a biobank of samples for DNA extraction and genetic analysis. Two important additional aims are to train junior African researchers and to foster multidisciplinary collaboration in CHD.

The day closed with a prize-giving: the best abstract was awarded to Dr Intisar Ibrahim for the presentation of the work of colleagues' Dr Tajudeen Bushari and Prof Salafa Ali in examining the accuracy of hand held echocardiography for the diagnosis of congenital heart disease.



**Dr Intisar Ibrahim, Sudan,
Best Fellow Presentation Prize.**

All present felt that the workshop had been highly successful as a first step to committing ourselves to a new era of collaboration and networking to improve the lives of children with heart disease in Africa.

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References

References are available as supplementary material at *European Heart Journal* online.