A North African perspective on pediatric cardiac services: A focused interview with Dr. Sulafa Ali

Q1. You have been credited with almost single-handedly establishing pediatric cardiology as a specialty in Sudan over the last 12 years.[1] Can you summarize the changes that you have witnessed in Sudan in health care as a whole and also with particular reference to pediatric cardiology and your own program over this time frame?

Health services in Sudan still suffer great shortages due to political instability and low expenditure on health. Recently, the introduction of pediatric subspecialties such as pediatric nephrology, endocrinology, gastroenterology, neurology, and cardiology[2] has helped to improve children’s health-care services although there continues to be a huge unmet need.

Regarding pediatric cardiology, the following activities have been initiated:

1. Training: A pediatric cardiology fellowship program was established in 2012 and so far five batches have enrolled. The program is accredited by the Sudan Medical Specialization Board and caters to not only candidates from Sudan but also from the neighboring region. Didactic lectures, tutorials, echocardiography review sessions as well as hands-on training are offered. Collaboration with other countries such as Saudi Arabia, Egypt, and India has helped us to consolidate training through visiting consultants and joint workshops.

2. Cardiac catheterization: In 2004, a program of interventional catheterization for congenital heart disease (CHD) was initiated,[3] and again through collaboration with colleagues abroad, it is now well established with most of the interventions available including device closure, balloon dilatation, and stenting.

3. Rheumatic heart disease (RHD) control: RHD is highly prevalent in Sudan, and the earlier program aimed at RHD control was ended in 1990. In 2012, we proposed to reactivate a control program and succeeded in obtaining approval from the Ministry of Health.[4] It is a self-funded program based on voluntary work through a committee of cardiologists and pediatricians. Despite the lack of funding, the program has managed to achieve the introduction of primary prevention, consolidation of training of physicians and health assistants as well as raising public awareness about this disease in rural areas.

We carried out an epidemiological study using handheld echocardiography machines in South Darfur (West of Sudan) where we found a prevalence of about 26/1000 while in Khartoum, it is <1/1000. This study as well as results of our hospital register mapped the areas that needed to be targeted with control programs.

Q2. In order for our readers to understand better, could you tell us about the status of pediatric cardiac surgery and pediatric cardiac intensive care in Sudan? How many pediatric heart surgeons do you have in the country? Do you have capabilities for newborn and infant heart surgery, recognizing that these elements are a vital component of comprehensive pediatric cardiac care?

We have a huge shortage of pediatric cardiac surgery. There is only one congenital heart surgeon in Sudan (population of 30 million), and the intensive care facilities are not yet adequate to deal with open heart surgery in neonates and young infants although closed heart procedures such as coarctation repair and pulmonary artery banding can be done for any age. To address this, we collaborated with countries like Malaysia where candidates were sent for pediatric cardiac surgery and intensive care fellowships. Many of these candidates after returning to Sudan have emigrated to be employed in the Gulf area, with a resultant huge deficiency of these services in Sudan.

Q3. What proportion of infant mortality is likely to result from heart disease?

Also, what proportion of babies born with CHD has access to a center that has comprehensive facilities?

We do not have exact statistics, but as you can expect, CHD will be an important cause of neonatal and infant death. I would estimate the proportion of babies born with CHD who have access to comprehensive services to be about 10%.

Q4. Does the government view pediatric heart care as a priority area?

Expenditure on health is substantially low; therefore, the government probably does not consider it a priority. On the other hand, there is a huge expenditure to the government related to the number of children traveling abroad for treatment; this is often used as a tool to press on the government to improve the situation.

Q5. Where do you see Sudan in the context of the situation in all of Africa? Does it represent the typical African situation or do you think you have a better overall situation?
Initially, Sudan was in a better situation, starting open heart surgery and cardiac catheterization in the year 2000 and having a number of adult cardiologists and adult cardiac surgeons. However, with political instability, particularly with US sanctions and emigration of trained personnel, Sudan has fallen behind other countries in the region which have started to develop at a much faster pace.

Q6. What can be done toward the goal of making pediatric cardiac care available to every child in the country? What are the main barriers? How can they be overcome?

The main barriers are:
1. Internal political instability leading to financial instability and nonsustainability of services with dependence on charities to help the poor children
2. External sanctions leading to difficulties of importing medical equipment and their maintenance
3. The threat of competitive salaries for medical jobs that is posed by the Gulf countries, repeatedly draining our medical resources. There are currently about 15 Sudanese pediatric cardiologists, four congenital heart surgeons, and five intensivists working in the Gulf region. The social and geographical ease for them to live there poses a threat to our services.

Potential solutions:
1. Increasing the numbers of doctors in training will in turn lead to an increase in the number of retained staff
2. Collaboration and twinning with cardiac centers to consolidate training and improve the outcome. We have a good collaboration with the Institut Jantung Negara in Malaysia who have helped us to train many candidates
3. Strengthening partnerships with charities: we have a charity group called The Sudanese Children’s Heart Society which is assisting in fundraising for the poor patients by building good relations with similar societies abroad (http://www.sudankidsheart.org).

Q7. Has the increase in trained pediatric cardiologists in the recent years helped to advance pediatric cardiac care delivery within the country? Please elaborate

Absolutely! The current pediatric cardiology program has managed to:
1. Increase the number of echo clinics from 1 per week in 2003 to 10 per week in 2007 in Khartoum as well as establish three clinics in Al Obeid (Western Sudan), Nyala (South Darfur), and Port Sudan-Eastern Sudan
2. Standardize echo training and accreditation is according to international recommendations.[i] Recording and reviewing echos in weekly meetings enable fellows and young cardiologists to have educational and academic opportunities
3. Provide 24-h a day pediatric cardiology service in the main children's hospital and the Sudan Heart Center through our team
4. Enable the fellows to attend regional and international conferences and courses, including the last conference of the Pediatric Cardiac Society of India which was attended by three of our fellows. This will have a positive impact on their performance and widen their exposure
5. Conducting an annual Pediatric Cardiology Review Courses with invited international speakers.

Q8. What are the future directions for your pediatric cardiology program? Where do you go from here?

The main goals are to increase the number of cardiologists, surgeons, intensivists, and nursing staff and at the same time consolidate financial support for poor children requiring treatment through our partner organizations. We plan to promote Sudan’s program in nearby countries by providing training as well as patient care. In Sudan, higher education in general and medical education in particular has been established since 1902; therefore, many African students come to Sudan for university and postgraduate education. We plan to consolidate our services to have centers of excellence that serves Central, East, and West Africa.

Q9. What have been the effects of medical tourism on the health-care systems within African nations? Please elaborate

Medical tourism is a double-edged sword. While it can help to provide much-needed health care in some areas, if abused by commercial brokers and middlemen, it can have disastrous effects on the local health-care systems in Africa. Recently, countries like India have managed to attract the attention of Africans due to the competitive cost, good outcomes as well as professional management of patients and families.

Despite our limited resources, we do receive patients from Ethiopia, Eritrea, Chad, and other African countries seeking pediatric cardiac services, and this urges us to improve our system.

Q10. What would you advise fellow Africans/African nations regarding future health-care policy and planning given the UN prediction of exponential population growth in the continent over the next 50 years?

Return of Africans who went abroad for training in United States, Europe, and other developed countries together with continuous collaboration with centers abroad, dedication to help the poor rather than help your own self, all these together with transparency, and teamwork can make impossible things happen.
Q11. How can countries like India help in the progress of health care of nations in Africa?

India has already started taking part in African health care. I suggest the following:
1. Communication between academic and professional institutions on both sides to standardize the channels
2. Writing mutual agreement notes with these institutions that detail the expected input from each party
3. Working on Indian training bodies to develop policies for training of non-Indians. This can be achieved through formally recognized scholarships/fellowships, visiting lecturers, and focused training courses, for example, in interventional catheterization or electrophysiology
4. The trends of commercial brokers’ involvement in health care need to be carefully addressed as this will lead to weakening of the newly built trust in Indian medical facilities.

Lastly, I would like to thank The Annals of Pediatric Cardiology for giving me this chance to discuss the problems of this specialty in Sudan and Africa.

Thank you

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