

# Interventional catheterization for congenital heart defects: what can we do for others? Project Rwanda

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Interventional catheterization has nowadays become the method of choice in treatment of several congenital heart defects (CHD). It is also developing quickly in Poland. The number of transcatheter procedures reached a similar number to cardiac surgery procedures in CHD in 2018 (2293 vs. 2271) [1]. Our interest in international collaboration and development of interventional cardiology in CHD has been evolving for many years. Recently, we were awarded by the Polish Cardiac Society for 24 articles published in the years 2012–2017 [2]. In 2007 we started in our centre an educational programme for young interventional CHD cardiologists from different countries. Since then, we have trained 23 cardiologists (all below 40 years old) from different countries in Europe (Ukraine, Belarus, Bulgaria, Georgia, Italy, Russia), Latin America (Mexico, Colombia, Bolivia, Guatemala, Argentina), Asia (Uzbekistan, China) and Africa (Rwanda). The training period varied from 1 to 12 months.

A Letter to the Editor titled ‘Percutaneous treatment of CHD, what was new in 2014’ was recently published in *Kardiologia Polska* [3], describing, among other topics, my idea of a mobile cath-lab laboratory mounted on a truck for Africa needs. Despite the fact that we received support from a key person of the World Health Organization (WHO) and the Vatican, unfortunately, the latter project has not developed further. Also interest showed by African paediatric cardiologists in this idea (presented by me) during the CSI Africa Congress in Addis Ababa in December 2014 and the CSI Frankfurt (main congress) in June 2015 was moderate. I have started to think that something is wrong and that the idea might be too general and I should change the strategy [4]. The next step was my “tourist” visit to Rwanda in 2018 and fellowship of Dr Yves Mutabandama in 2019 in our centre

(Silesian Centre for Heart Diseases, Zabrze). He is well educated, finishing his paediatric cardiology training at Kigali Teaching University in Rwanda. Rwanda is a small African, equatorial country. It has only 26 000 square km and a population of 12.5 million inhabitants (60% children) with a stormy contemporary history. However, now it has become a politically and economically stable country. As in many other Central and Eastern Africa countries, there are no regular cardiac catheterizations laboratories. In Rwanda some simple percutaneous interventions in CHD were performed only during a few missions organized by a charity organization from Europe (the Chain of Hope, Belgium) with an X-ray C arm [5]. As we discussed with Dr Joseph Mucumbitsi (an experienced cardiologist) during my visit to Rwanda in 2018 and Dr Mutabandama, the need to organize a permanent cath lab in Rwanda, not only for treatment of CHD patients, but also for adult coronary artery disease procedures, is fundamental. It is a big project that will need strong support from many institutions, especially the Rwanda Ministry of Health. Economic support to build a cath lab and logistic support to educate all medical staff – nurses, technicians, medical doctors – will be needed. In my opinion, many international organizations such as WHO, charity foundations, European Society of Cardiology (ESC), and European Association of Percutaneous Cardiovascular Interventions (EAPCI) can do a lot in this field. There is also a place for Polish institutions such as PTK (Polskie Towarzystwo Kardiologiczne) and AISN (Asocjacja Interwencji Sercowo-Naczyniowych).

In conclusion, the idea of a mobile cath lab for Africa is not feasible. A more practical and useful strategy is to organize a fully equipped, traditional cath lab with financial, logistic and personal support.

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## Conflict of interest

The author declares no conflict of interest.

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