

Initiative: Cardiology and Development



“What You Are Doing Is of Real Value to People, and Experiencing This Is Probably Why Many People Choose to Practice Medicine”

Xavier Jouven, MD, PhD, director of Research Unit INSERM U970 of Cardiovascular Epidemiology and Sudden Death, Paris Cardiovascular Research Centre, Paris, France, and cardiologist and electrophysiologist, Hôpital Européen Georges Pompidou, Paris, describes the work of Cardiology and Development to Lindy van den Berghe.

In 1996, Xavier Jouven, MD, PhD, director of the Research Unit INSERM U970 of Cardiovascular Epidemiology and Sudden Death, Paris Cardiovascular Research Centre, Paris, France, and cardiologist and electrophysiologist, Hôpital Européen Georges Pompidou, Paris (see <http://circ.ahajournals.org/content/124/17/f97>), set up a nongovernmental humanitarian organisation to teach cardiologists in developing countries how to implant pacemakers. In 2012, this has joined 2 other projects to form Cardiology and Development. Professor Jouven and his colleagues regularly visit countries in Africa and Asia, such as Mozambique, the Ivory Coast, Cameroon, Mauritania, Niger, Mali, Togo, Senegal, Vietnam, and Cambodia, and also the Ukraine, to teach techniques.

In January 2012, Cardiology and Development went to Congo Brazzaville for the first time, where Professor Jouven implanted pacemakers into 7 patients with severe complete atrioventricular block with the assistance of a Congolese cardiologist, Stéphane Méo Ikama, MD. Dr

Ikama then implanted a pacemaker himself with the assistance of his team. All of the patients had severe late-diagnosed disease, and the 2 doctors had to deal with a series of cardiac arrests during the implantations, but all 8 operations were successful.



Congolese cardiologist, Dr Ikama, and his team watch Professor Jouven implant a pacemaker into a patient with severe complete atrioventricular block in January 2012. Photograph courtesy of Yasmine Saed-Quiblier.

“Diseases Are Prevalent in Africa That No Longer Exist in Developed Countries, Such as Rheumatic Heart Disease”

In 2012, after 50 missions and operations on >350 patients in 16 countries, it is hoped that many of the cardiologists whom Professor Jouven and his colleagues have taught will train their own colleagues in the future. The resulting network of cardiologists is enabling multinational epidemiological studies on the

prevalence of rheumatic heart disease in Cambodia and Mozambique to address cardiac diseases killing thousands of children and young adults.¹

Professor Jouven explains, “Teaching doctors how to implant pacemakers has been successful, and now I have set up a working group of cardiologists in developing countries looking at new neglected disease. Diseases are prevalent in Africa that no longer exist in developed countries, such as rheumatic heart disease. Children with damaged cardiac valves are dying from cardiac failure. This situation is a disaster because it is easy and not expensive to prevent rheumatic heart disease with penicillin G. We have shown that the prevalence of rheumatic heart disease in children is 10-fold higher than expected by the World Health Organisation.² I am proud of what my medical research team is doing in this area of new neglected disease, and we know that we are really helping people.

“Since 2010, we have been setting up an active cohort of 4000 patients with sickle cell disease and 1000 controls in Cameroon, Senegal, Mali, Gabon, and the Ivory Coast looking for cardiovascular complications. In 2013, we plan to launch a large programme of primary and secondary prevention of



January 2012. Dr Ikama and Professor Jouven preparing for a pacemaker implantation. Photograph courtesy of Yasmine Saed-Quiblier.



January 2012. The Congolese media record the first time Dr Ikama implants a pacemaker into a patient in Congo Brazzaville. Photograph courtesy of Yasmine Saed-Quiblier.

rheumatic heart disease, using systematic echo screening in schools to prevent severe valve damage leading to heart failure. Pilot studies are currently ongoing in Cambodia and Mozambique.”

Professor Jouven adds, “When you do important things in Europe or the United States, the doctor next to you will have done the same, but when you are in developing countries trying to help people with new neglected diseases, no one can replace you. You have to be successful. Your job and what you are doing is really helpful to the people, and this feeling is probably why many people choose to practice medicine.”

References

1. Marijon E, Ou P, Celermajer DS, Ferreira B, Mocumbi A, Jani DN, Paquet C, Sidi D, Jouven X. High prevalence of rheumatic heart disease with echocardiographic screening of children in South-East Asia and Sub-Saharan Africa. *N Engl J Med.* 2007;357:470–476.
2. Marijon E, Celermajer DS, Tafflet M, El-Haou S, Jani DN, Ferreira B, Mocumbi AO,

Paquet C, Sidi D, Jouven X. Rheumatic heart disease screening by echocardiography: the inadequacy of World Health Organization criteria for optimizing the diagnosis of subclinical disease. *Circulation.* 2009;120:663–668.

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January 2012. Cardiologists attending Professor Jouven's course on cardiac pacing in Congo Brazzaville. Photograph courtesy of Yasmine Saed-Quiblier.