

A report from the 6th World Congress of Pediatric Cardiology & Cardiac Surgery. Cape Town, Republic of South Africa, February 17-22, 2013

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The 6th World Congress of Pediatric Cardiology & Cardiac Surgery took place between February the 17th and the 22nd, 2013, in Cape Town, Republic of South Africa. This conference is held every 4 years, attracting specialists from all over the world. Its objective is to present the latest achievements in the field of diagnosing and treating congenital heart defects (CHDs), to exchange views, and to establish cooperation. The event was conducted in 6 concurrent sessions pertaining to: 1) Surgery, anesthesiology, and intensive therapy, 2) Interventional catheterization (from fetus to adult), 3) Health systems and heart disease, 4) Adults with congenital heart disease and the prevention of acquired heart disease, 5) Cardiology and imaging, and 6) Nursing.

Due to the interests of the author, this report focuses on the developments related to interventional cardiology. During the Congress, some cases were broadcast live from Frankfurt and Milan, as well as from local centers in the RSA. They were all very stimulating and generated interesting interactive discussions between the operators and the participants. Between the procedures, lectures were presented; among other topics, they pertained to the use of new stents, biodegradable materials, fetal interventions, rotational angiocardiology, and MRI techniques. Particularly thought-provoking was the discussion after the lecture of Dr John Thomson (United Kingdom), concerning the validity of performing patent foramen ovale closures. His next lecture focused on the analysis of the causes of complications during interventional procedures and the methods of their prevention. In turn, N. Wilson (UK) analyzed the results of patent ductus arteriosus (PDA) closures performed in infants of low body weight (less than 2 kg) with the use of special implants (Amplatzer Duct Occluder II Additional Sizes), primarily based on material obtained from the Gregorio Marañon Hospital in Madrid. Dr M. Alwi (Malaysia) talked about his experiences with PDA stenting in the treatment of CHDs, while W. Tworetzki (USA) presented results of fetal aortic valvuloplasties. Dr Z. Hijazi (USA) presented a lecture concerning the improvement of interventional catheterization results through the development of special intervention registers and the analysis of their results. In

turn, M. Carminati (Italy) discussed results of transcatheter closures of ventricular septal defects (VSDs), while M. Schneider (Germany) presented results of interventions performed in the treatment of aortic coarctation from fetal life to adulthood. J. Cheatham (USA) analyzed international results of employing hybrid procedures in the treatment of hypoplastic left heart syndrome (HLHS). Since 2005, over 400 procedures of this type have been performed in the USA, Canada, United Kingdom, Brazil, Germany, and Japan. The current 1-year survival rate is 70-80%; experience appears to be paramount for achieving favorable outcomes, as failures are mostly observed at the start of the learning curve. The lecturer concluded by stating that the results of hybrid procedures in HLHS are comparable with those achieved with conventional surgical methods. H. Sivert (Germany) presented the capabilities of techniques that denervate the sympathetic fibers of renal vessels in order to effectively reduce systemic arterial hypertension. In turn, Dr A. Redington (UK) discussed the issues related to right ventricular failure. The right ventricle is approx. 4-5 times more sensitive to afterload than the left ventricle; therefore, its treatment should in this case be focused on reducing pulmonary resistance (e.g. by the use of pulmonary vasodilators). Furthermore, new ideas with regard to interventricular interactions were also presented. The influence of left ventricular contraction on right ventricular contraction is approx. 45%. Therefore, in acute isolated right ventricular failure, an increase of systemic resistance may improve RV ejection volume by influencing LV systolic function. In this situation, tachycardia may be detrimental to these processes. However, beta blockers are usually contraindicated in patients with pulmonary hypertension. Ivabradine (an agent from this group which slows down heart rate without negatively reducing myocardial contractility) may play an important role here. Five-year survival rates of patients with Eisenmenger's syndrome are better than those of patients with idiopathic pulmonary hypertension. For this reason, Potts anastomosis (connecting the descending aorta with the left pulmonary artery) has lately been effectively used in children with primary pulmo-

nary hypertension, resulting in the improvement of their survival rates and functional class (as also indicated by own experience with regard to an 8-year-old girl after this procedure).

In conclusion, it was an important congress, exhibiting the interdisciplinary complementarity of various subspecialties concerned with the treatment of congenital heart defects in children and adults.