

# Progress in the interventional treatment of congenital and structural heart defects — scientific award of the Polish Cardiac Society

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Our team (Jacek Białkowski, Małgorzata Szkutnik, Roland Fiszer) has recently received a scientific award from the Polish Cardiac Society for the year 2017. This considerable distinction was related to our 24 articles published between the years 2012 and 2017. These publications were associated with progress in the interventional treatment of congenital and structural heart defects.

The main topics included:

- 1. Dilatation of the native coarctation (CoA) and recoarctation (ReCoA) of the aorta with stents.** We published our experience in this subject in a group of 136 patients (adolescents and adults) treated in the years 1996 to 2016. The study population was divided into two groups — 108 patients with native CoA and 28 patients with ReCoA. There were no differences in the immediate and long-term outcomes between the groups. The conclusion of this study was that stenting in CoA and ReCoA is an effective and safe procedure with good late outcomes [1]. We also stated that the implantation of new large cobalt-chromium stents provides a good therapeutic option in such cases [2].
- 2. Transcatheter closure of atrial septal defect (ASD) type II.** We have published several studies regarding this subject. Between 1997 and 2018, 1521 patients underwent percutaneous closure of ASD in our Centre, with the use of similar nitinol wire mesh occluders produced by different companies (Amplatzer [USA], Figulla [Germany], Cocoon [Thailand], and several Chinese devices: Cera, HeartR, Cardio-O-Fix, and Hyperion). The last two devices have lost or will soon lose the Conformité Européenne mark due to the lack of European certification renewal. In our studies, we proved that all of these devices had similar effectiveness and safety in adults and adolescents. It is our policy now to percutaneously close ASDs even in smaller children (including infants and children below three years old), when they are symptomatic or when the parents of the child insist on such treatment (an increasingly common phenomenon). In this situation the best therapeutic option is to use the Amplatzer or Cocoon occluders; their advantage is the smaller size of the delivery system [3].
- 3. Transcatheter closure of patent ductus arteriosus (PDA).** In my opinion, the most relevant progress in our clinical practice was the substitution of detachable coils with a new device — Amplatzer Duct Occluder type II Additional Sizes (ADOIIAS). This device was introduced in 2012 and was dedicated to PDA closure in small children. Together with a group from Gdansk led by Dr. M. Chojnicki, we have recently reported on the application of ADOIIAS for closure of PDAs < 2.5 mm in diameter in older patients (also adults) [4]. The effectiveness, high closure rate, and lack of complications support the priority of ADOIIAS application instead of coils in the percutaneous closure of PDA.
- 4. Percutaneous pulmonary valve implantation (PPVI).** This relatively new technique is particularly useful in the case of significant pulmonary insufficiency and/or stenosis, for example after surgical corrections of tetralogy of Fallot. In our study (performed in cooperation with the Polish Mother's Memorial Hospital in Lodz) a group of 46 patients underwent PPVI. All implantation procedures were successful — 44 Melody and two Edwards systems were used. The study concluded that PPVI is a safe procedure with encouraging results, and it enables deferment of surgical reintervention in the majority of patients with right ventricular outflow tract dysfunction [5].
- 5. Miscellaneous papers.** This point concerns several other important topics such as our positive experience in the percutaneous closure of patent foramen ovale in a case of cryptogenic stroke in children [6] or paravalvular aortic leak in a child [7], and a novel technique of percutaneous downsizing of a Blalock-Taussig shunt by multiple stent-in-graft implantations [8].

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Temat przewodni najbliższej Konferencji „REHABILITACJA KARDIOLOGICZNA — POSTĘPOWANIE KOMPLEKSOWE” nawiązuje do korzeni i do teraźniejszości rehabilitacji kardiologicznej. Coraz częściej mówimy o opiece kompleksowej w kardiologii, a to właśnie dobrze realizowana rehabilitacja kardiologiczna była i jest najlepszym przykładem takiej opieki. Dodatkowo rehabilitacja kardiologiczna w każdej formie realizacji (szpitalna, ambulatoryjna, telerehabilitacja) bardziej niż kiedykolwiek stała się elementem kompleksowego podejścia do opieki nad pacjentem kardiologicznym. Mamy nadzieję, że nasze Sympozjum — spotkanie lekarzy, fizjoterapeutów, pielęgniarek, psychologów i dietetyków zajmujących się czy zainteresowanych rehabilitacją kardiologiczną — będzie okazją do wzajemnego korzystania z bogatej wiedzy oraz doświadczeń wykładawców i uczestników.

Szczegółowy program oraz rejestracja na stronie: <http://rehabilitacja2019.ptkardio.pl/>

