

Long term follow-up of children after treatment of isolated aortic coarctation.

*Kuzma J., Rudzinski A., Krol W., Werynski P., Palczewska D., Pietrucha B.
Paediatric Cardiology, University Children's Hospital in Krakow, Poland.*

Introduction:

The treatment of aortic coarctation (CoAo) depends on many factors including coexisting heart defects, the age and body weight, as well as the experience of cardiosurgery centre. In Cracow during the last 15 years we changed the strategy for treatment of CoAo. We introduced interventional procedures (balloon aortic angioplasty BAA and stent implantation) and the end to end anastomosis became the method of choice in cardiosurgery. The aim of the study is to evaluate the rate of recoarctation and the occurrence of systemic hypertension with necessity for interventional procedures or reoperations depending on the age and type of treatment.

The methods: the material consisted of 216 patients (pts) (143 males and 73 females with ratio 2:1) with CoAo treated with interventional procedures or surgery for the last 15 years in Cracow. The patients were divided into 3 groups: Gr I: n=135 infants, Gr II: n=52 children operated on at the age >1 year, Gr III: n=29 pts treated with BAA (n=7) or stent implantation (n=22).

Results: The age of the treatment was: $x=2,0 \pm 2,5$ months in Gr I, $x=6,7 \pm 5,2$ years in Gr II, $x=10,1 \pm 4,7$ years in Gr III. Follow-up was $x=7,8 \pm 4,3$ years in Gr I, $x=10,7 \pm 4,1$ years in Gr II and $x=4,7 \pm 2,4$ years in Gr III. All patients survived. Altogether 46 pts required BAA mostly in Gr I - 41pts (30%) vs 2 pts (4%) in Gr II and 3pts (9%) in Gr III. Stents were implanted in 3pts (6%) in Gr II and 2pts(7%) in Gr III (Covered-stent Grafts due to aortic aneurysm). Systemic hypertension was found predominantly in Gr III - 13 pts (44,8%) vs 6pts (4,4%) in Gr I and 11pts (21%) in Gr II. Reoperation was necessary in 9 pts due to re-coarctation with hypoplastic aortic arch (6pts -4,4% in Gr I and 3pts -6% in Gr II).

Conclusions: Late diagnosis and treatment of CoAo is a risk factor for persistent systemic hypertension. The necessity for reinterventions is significantly higher in children operated on in neonatal period.