

Dilatation of pulmonary artery stenosis and coarctation of the aorta with new Cobalt-Chromium Stents (Andrastents XL & XXL).

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Introduction : Stenosis of the major vessels are currently treated successfully with stent implantation. Recently new cobalt - chromium stents (namely XL and XXL Andrastents, Andramed, Germany) were introduced into clinical practice. This alloy is combined with high biocompatibility, radial strength and flexibility. The objective of this paper is to present our experience with application of Andrastents XL and XXL in the dilatation of stenosis of pulmonary artery and coarctation of the aorta (CoA).

Methods: There were 19 patients treated with 21 Andrastents.

In 7 patients (age 16-24 years, weight 54-77 kg) before Melody valve implantation prestenosing with 9 Andrastents XL or XXL (length 30,39 or 48 mm) in calcified pulmonary homograft were done. In one patient with long stiff stenosis 3 stents were necessary.

In another 9 patients (age 15-55 years, weight 47-85 kg) with native CoA or ReCoA 9 Andrastents (XL or XXL length of 30, 39 or 48 mm) were implanted.

In 3 patients (age 6, 9 and 10 years, weight 17, 30 and 33 kg respectively) 3 Andrastents 30 XL were implanted to the stenosed right or left pulmonary artery (PA) closely to the bifurcation. Mean fluoroscopy time in case of CoA was 7,3 (3,9-13) min and in PA branch stenosis 12,9 (8,7-16,4) min. The follow up ranged from 1,5 to 25 (mean 9) months.

Results: All procedures were finished successfully. In follow-up no fracture of the stents were observed. In cases of Andrastent and Melody valve implantation mean gradient in RVOT decreased from 42,8 to 17,8 mm Hg, in case of CoA and reCoA from 48,2 to 11,3 mm and in case of PA branch stenosis from 47 to 19,6 mm Hg. No aneurysm formation was observed in any patient.

Conclusions: Implantation of Andrastents XL and XXL are very good therapeutical option for the treatment of stenosed great vessels.