

Clinical News Corner

Focussing on current and new clinical procedures An Andamed Publication

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Dilatation of pulmonary artery and aorta with the new cobalt - chromium stent

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Introduction:

Stenosis of big vessels are currently treated successfully with stent implantation. Recently a new cobalt–chromium stent (AndraStent XL & XXL Andamed Germany)was introduced into clinical practice. This alloy is very high biocompatible with good radial forces (compared with other stent).

Objective:

To present our preliminary experience with the implantation of AndraStents XL and XXL as the 1st CoCr Stent for large vessels, in the dilatation of stenosis of pulmonary artery and coarctation of the aorta.

Material and method:

There were 9 patients therapied with the application of this new implant.

In 5 pts (age 16-24 years, weight 54-77 kg) presenting of calcified homograft in Right Ventricle in Outflow Tract (RVOT) was done before “Melody” (Medtronic Corp.) valve implantation (Fig 1 A,B). AndraStents –Andamed GmbH (XL or XXL diameter - 30 or 39) have been implanted prior to Melody placement.

In 2 other patients (19 and 51 years old women with weight 47 and 70 kg respectively) native coarctation (CoA) was treated with AndraStent 39 XXL and 39 XL (Fig 2 A,B).

In 2 boys (aged 6 and 9 years -weight 17 and 30 kg) Andrastents 30 XL were implanted to the right and left pulmonary artery (PA) respectively (Fig 3 A,B). In both patients stents were implanted to postsurgical stenosis if the origin of pulmonary branch. The follow-up range from 1- 15 (mean 6,2) months.



Fig 1 A .Twenty years old man after correction of TOF and exchanging of pulmonary homograft at the age of 15 years. Stenosis and incompetence of pulmonary valve. Pretesting of RVOT with Andra stent before planned Melody implantation (AS-39XL, balloon BIB 20 mm).



Fig1 B. The same patient after Melody Valve implantation inside AndraStent

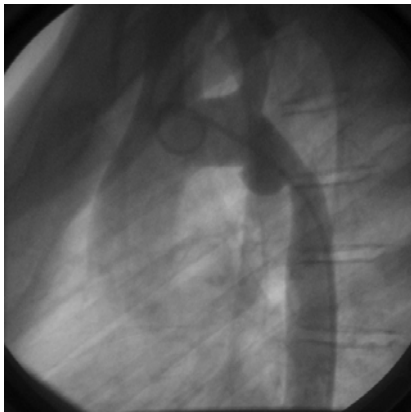


Fig 2 A. Nineteen years old female with CoA and native aneurysm. Gradient in the isthmus – 49 mm Hg.

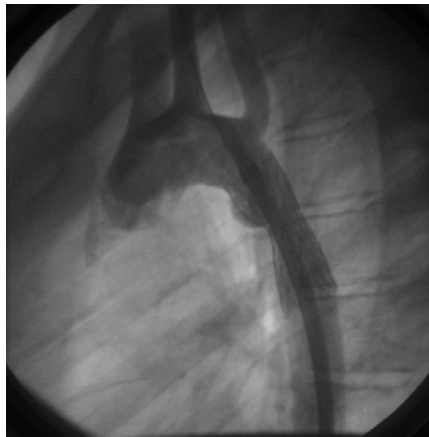


Fig 2 B. The same patient after Andra stent implantation (AS-39XXI, balloon 16 mm). Redilatation of stent planned after 3 – 6 months.

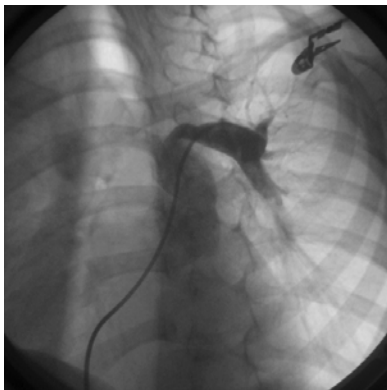


Fig 3 A. Nine years old male after correction of DORV with significant narrowing of the origin of LPA.

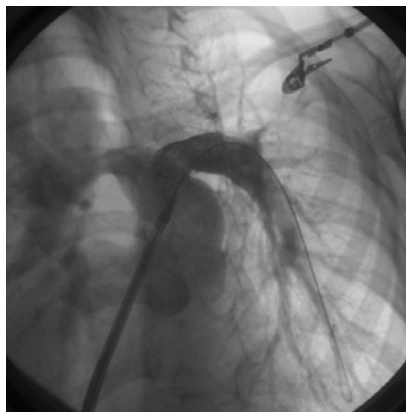


Fig 3 B. The same patient after Andra stent implantation (AS-30XL, balloon 14 mm)

Results:

All procedures were performed successfully (technical success rate 100%).

During follow-up of all the patients no fracture of the Stent has been observed.

(Radiological follow up with 0% Fracture Rate)

In cases of AndraStent and Melody valve implantation gradient in RVOT decreased from 36 to 18 mm, in case of PA stenosis from 33,5 to 14 mm and in case of CoA from 36 to 14,5 mm Hg.

No aneurysm formation was observed in any patient.

Conclusions:

AndraStent XL and XXL are very good and promising therapeutically option for the treatment of stenosed great vessels.

