

Clinical News Corner

Focusing on current and new clinical procedures An Andramed Publication

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Case Report: Native Coarctation of the Aorta treated with AndraStent

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Case History: An active 12 year old boy was noted to have a systolic heart murmur and an elevated blood pressure while being worked up for speech developmental delay by the local Paediatrician. Further investigation by a Paediatric Cardiologist revealed a Coarctation of the Aorta with a non-invasive gradient between the right arm and left leg of 50 mmHg and an echo gradient of 60 mmHg with diastolic run off in the abdominal aorta and good left ventricular systolic function. Resting blood pressure on the left arm was 163/85 mmHg.

Procedure: Cardiac catheterisation was carried out in deep conscious sedation and without general anaesthesia through the right femoral artery. A 4 Fr. Pigtail catheter was advanced through a 5 Fr sheath into the ascending aorta and simultaneous pressure recordings via the arterial sheath and the catheter demonstrated a gradient of 60mmHg across the Coarctation with the blood pressure in the ascending aorta being 136/89, mean 113 mmHg. The aortogram showed a short, tight stenosis in the isthmus region of the descending aorta distal to the left subclavian artery and multiple collaterals (Fig 1a and 1b). After careful measurement of the anatomy and diameters the pigtail catheter was replaced by a 12 Fr. Mullins sheath (Cook) over an Amplatzer superstiff exchange wire.



Fig 1a
Ascending aortogram RAO 25° showing short coarctation

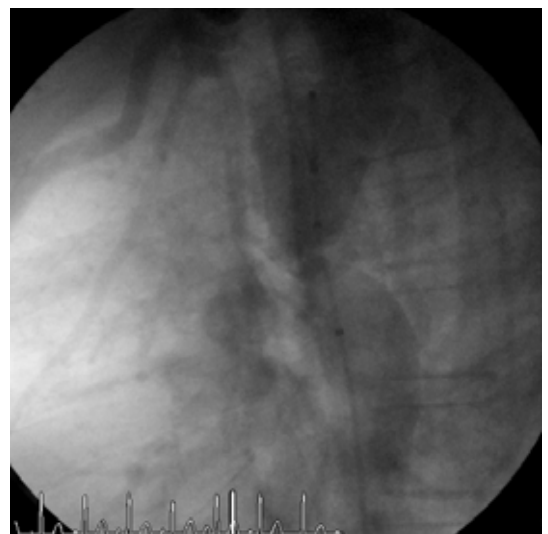


Fig 1b
Ascending aortogram lateral showing short coarctation

A 21 mm XL AndraStent (Andramed Germany) was hand-crimped on a 18 mm x 60 mm Maxi LD Ballon (Cordis) and hand injections confirmed the optimal stent position in the coarctation site (Fig 3). The balloon was inflated with 6 atm. using an inflator. The post implantation angiogram demonstrated an optimal stent position with relief of the obstruction and no extravasation (Fig. 4a+b, 5). Hemodynamic measurements post implantation showed no residual gradient between ascending and descending aorta. The stent shorting was 6% with a homogeneous diameter. Overall procedure time was 30 minutes with a fluoroscopy time of 5.7 minutes. The patient was discharged home 48 hours post procedure.

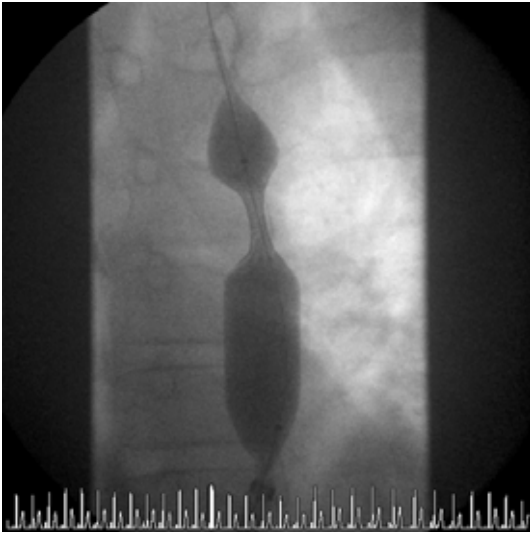


Fig 3
Picture of stent implantation in LAO 25° projection.

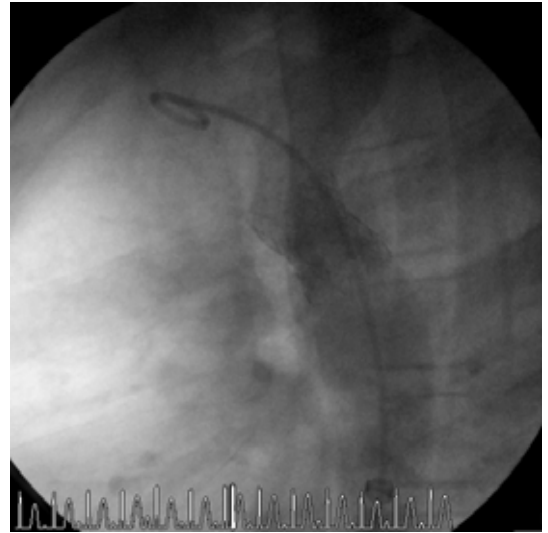


Fig 4a
Angiogram in lateral projection following stent implantation.

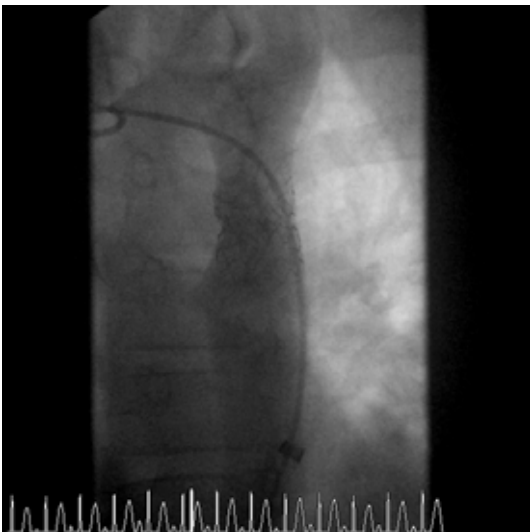


Fig 4b
Aortogram after stent implantation in LAO 25° showing relief of coarctation.

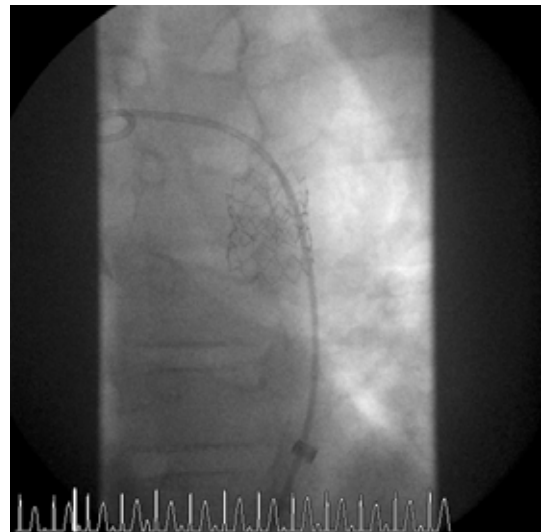


Fig 5
Picture of stent after deployment in LAO 25° projection.

Result: The AndraStent produced an excellent clinical result with the added benefits of the chromium-cobalt technology as well as the semi-open cell design which offers superior results when placing the stent in a angulated part of the aorta.

