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Interventional treatment of aortic coarctation in neonates and infants - one centre results.

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Introduction:
Aortic coarctation occurs in 5-8% of newborns with congenital heart disease. Surgical treatment is an obligatory standard of clinical management in children with primary coarctation under 6 months of age. The aim of this study is to present our experience in interventional cardiology procedures for primary and secondary aortic coarctation in neonates and infants.
Methods:
51 pts aged from 6 days to 12 months required balloon angioplasty, while in 6 pts stent implantation was done.
Primary coarctation of aorta appeared in 18 pts (10 newborns, 1 premature-700g) aged from 6 to 189 days (mean 49).
Interventions were performed as an emergency management in pts not qualified for surgical techniques due to severe condition or additional pathology (critical aortic valve stenosis, multi-organ insufficiency, pulmonary hypertension or severe infection).
Recurrent or residual coarctation occurred in 33 pts, aged from 1.5 to 12 months (mean 168 days), coexisting usually with other complex heart defects (TGA+VSD+CoA,Taussig-Bing+CoA, VSD+CoA, IAA+VSD).
Results:
In all pts interventional procedures were used efficiently. The mean pressure gradient decreased from 35.7 to 11.2 mmHg in pts with primary CoA and from 37.8 to 8.6 mmHg in pts with restenosis (evaluated by cardiac catheterization).
4 newborns with additional critical aortic valve stenosis underwent simultaneous balloon valvuloplasty with good result.
Conclusions:
Stent implantation was successfully done in 4 pts with primary, tubular stenosis of aortic isthmus and concomitant hipoplastic aortic arch and in 2 pts due to recoarctation.
Conclusions:
Emergency precutaneous interventions in neonates and infants under 6 months of age with primary CoA are worth to consider.