P-191

Percutaneous catheter interventions via Glidesheath Slender in small children

Gendera K. , Ewert P., Georgiev S., Tanase D., Genz T., Hosny Fayed M., Eicken A.
Department of Pediatric Cardiology and Congenital Heart Disease, German Heart Center Munich, Technische Universität München, Germany

Objectives
In small children the diameter of the vessels comprises a significant limitation for catheter interventions. Femoral arterial occlusion is a serious complication that can cause limb length shortening. Subclavian arterial occlusion may lead to subclavian steal syndrome or growth disorders of the upper extremity if distal. Bilateral vessel occlusion can preclude further catheter interventions. The Glidesheath Slender is an innovative sheath with a thinner wall and hydrophilic coating. The inner diameter is compatible with 5F or 6F guiding catheters, depending on the sheath being used, whereas the outer diameter is similar to that of a regular 1F-less sheath. To reduce risk for scarring and occluding the vessels, interventions can be performed via Glidesheath Slender sheath.
Methods
We present a group of 22 small children (median age: 60 days (min.3; max.790), median weight: 4.1 kg (min.1,4; max.10.3)) in whom percutaneous interventions were performed via Glidesheath Slender. The type of intervention: VSD occlusion (n=6), re-coarctation management with stent implantation (n=5), stenting of the ductus arteriosus (n=4), LPA angioplasty (n= 3), stenting of the Sano shunt (n=1), Rashkind procedure (n=1) and coil embolization of MAPCAs (n=1). In 20 children the intervention was performed from femoral access (artery n=15, vein n=5) and in 2 from the subclavian arterial access. 5F (n=20) and 6F (n=2) Glidesheath Slender were used in our study group. In all patients vessel access was obtained under ultrasound guidance.
Results
No serious complications associated with vessel cannulation occurred. None of the children presented symptoms of the vessel narrowing or occlusion. In all patients in whom the procedure was performed from the arterial access the pulse on the peripheral arteries (posterior tibial artery or radial artery) was palpable afterwards. No signs of vein occlusion was noticed in patients in whom venous access was used.
Conclusion
The Glidesheath Slender enables to perform life-saving interventions in very small children with 1F-less outer sheath diameter. The risk of vessel narrowing/occlusion probably is lower with this sheath. The use of Glidesheath Slender, which was developed for coronary interventions with radial artery access, in small children is promising.