

JCK Oral

JCK Oral 8 (III-JCKO8)

Cardiovascular Imaging

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[III-JCKO8-02]New fusion imaging - VesselNavigator in CHD interventions

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Objectives: VesselNavigator is a new fusion imaging modality which overlays 3D CT image onto a live fluoroscopy image. It provides an intuitive and continuous 3D roadmap by rotating overlaid CT imaging at any directions, and allows for both advanced diagnostic and interventional cardiac catheterization procedures in patients with congenital heart disease(CHD). Recently, in our institute it was available first in Asia. We would like to share our initial experiences with the audiences.

Methods: Between May 2016 and March 2017, VesselNavigator has been used in 14 patients with postoperative CHD; tetralogy of Fallot or pulmonary atresia in 7, transposition of great artery in 3, coarctation of aorta in 2 and others in 2. Mean age was 13.3(0.5 – 28)years, and mean body weight was 36.3(7 – 68)kg. It helped to access a target vessel easily, and to find out the best angiocamera angle for diagnosis and interventional procedure without additional angiography.

Results: VesselNavigator was used for pulmonary arterial interventions in 8(stent in 6, balloon angioplasty in 2), MAPCA occlusion in 1 and diagnosis in 5 patients. Mean fluoroscopic time and procedure time were 21(11 - 38) and 63(30 - 97) min., respectively.

Conclusions: VesselNavigator is a promising modality for CHD diagnosis and treatment. Using VesselNavigator as a 3D roadmap without additional 3D rotational angiography, we can reduce fluoroscopic and procedural time, contrast amount and radiation exposure.