

P-294

Doppler and Radionuclide Pulmonary Blood Flow Patterns After Transcatheter Closure of Patent Ductus Arteriosus

Ece İ(1), Pac F.(1), Ballı S.(1), Keçeci D(2)

Türkiye Yüksek İhtisas Education and Research Hospital, pediatric Cardiology(1)Ankara, Turkey

Türkiye Yüksek İhtisas Education and Research Hospital, nuclear Medicine, Ankara, Turkey(2)

Objective: Impaired left lung perfusion (LLP) has been described after transcatheter closure of the patent ductus arteriosus (PDA). This study was conducted to evaluate impaired LLP following occlusion of persistent arterial duct with both echocardiography and radionuclide study.

Methods: Between November 2008 and December 2011, a total of 60 patients (mean age 16.5 ± 16.7 years) underwent successful transcatheter PDA occlusion. Cook detachable coil was used in 31 patients, Amplatzer duct occluder (ADO) was used in 29 patients. Echocardiography were performed to all patients in order to calculation of the Doppler velocity index (DVI) and lung scintigraphy. The DVI was calculated by the difference between the left pulmonary artery (LPA) and right pulmonary artery (RPA) peak flow velocities relative to the pulmonary trunk (PT), and expressed in percentage, terms.

Results: Decreased LLP was found in 8 patients, 2 with Cook detachable coil (6.5 %) and 6 with ADO (20.7 %). These patients displayed greater DVI values compared with the others [median DVI= 26 (10-50) versus 15 (8-50)] ($p=0.043$). When $DVI \geq 30$ is taken as the cut-off value, it is possible to estimate unimproved patients with 92.2 % sensitivity and 85 % specificity.

Conclusion: Impaired LLP may appear following transcatheter closure of PDA with various devices and DVI has high sensitivity and specificity in predicting patients with LLP deficiency.