PDA Device Closure In “Hypertensive PDA”

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Introduction:
In developing countries, PDA still remain a cause of irreversible severe pulmonary hypertension due to late diagnosis as there is poverty, poor education and few cardiac centers to treat for the same. This study will highlight the role of interventional pediatric cardiologist to reduce these cases progressing towards ‘irreversible pulmonary hypertension’.

Objective:
To assess the pulmonary artery pressures in patients with large Patent Ductus Arteriosus (PDA) and severe pulmonary hypertension undergoing device closure.

Material and Methods:
This descriptive study was carried out at CPE Institute of Cardiology, Multan, Pakistan from 2007 to 2015. Patients who had undergone device closure for hypertensive PDA were included. Patients with mean PA pressures about 66% of systemic are labeled to have hypertensive PDA. Reversible severe pulmonary hypertension decided on clinical ground (normal room air saturation, cardiogegaly on x-ray chest). Patients with weight < 12 kg were excluded. Patient’s record was analyzed retrospectively. Echocardiography was performed before and after the procedure. Pulmonary artery pressures were measured in catheterization laboratory before and after the procedure.

Results:
A total of 15 patients who had ‘hypertensive PDA’ underwent PDA device closure. All patients were female. Mean age is 9.8 ± 3.1 years. PDA size measured on lateral angiogram is 9.1 ± 2.3 mm. Device size used 14+2 mm on aortic side. Mean PAP measured on catheterization is 64±12.38 mmHg before device closure and 30.8+ 6.34 mmHg after device closure. There is significant fall in mean PAP pressures after device closure in (p-value 0.002)

Conclusion:
PDA device closure in hypertensive PDA significant reduced mean pulmonary artery pressures.

Key words:
PDA device closure, hypertensive PDA, severe pulmonary hypertension.