

Comparison Between Echocardiography Finding and Cardiac Catheterization Data in Diagnosis of Pulmonary Hypertension

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Abstract

Background- Pulmonary hypertension (PHT) is a common accompaniment of many congenital cardiac lesions. Cardiac catheterization is the gold standard method for confirming the diagnosis of PHT and for guiding management. Doppler ultrasound also can be used non-invasively to estimate the pulmonary artery pressure.

Methods- We reviewed the clinical history, examination and echocardiogram of 84 patients (male = 50, female = 34) [mean age = 4.2 y (3m-15y) who underwent cardiac catheterization for their congenital heart problem in our pediatric cardiology ward (Mar 2001-Apr 2002). The patients were divided into pulmonary hypertension (PHT) group and normal pulmonary artery pressure (NPAP) group by the results of catheterization.

Results- PHT was diagnosed in 40 patients (47%) by catheterization compared with 42 patients (50%) by echocardiography. Mean age of PHT groups was 3.38 y (3m-14y) by 24 male (60%); and 5.5y (8m-15y) by 26 male (59%) in NPAP group. The most common anatomic lesions in PHT group were VSD (N = 20, 50%), PDA (N=13, 32%) and AVSD (N=7, 17%). The sensitivity and specificity of echocardiography in diagnosis of PHT was 100% and 95% respectively. The positive predictive value of echocardiography was 95% and the negative predictive value was 100%.

Conclusion- These results indicate similar diagnostic power by echocardiography and catheterization in identifying pulmonary hypertension.