**RIGHT VENTRICULAR DYSFUNCTION DIFFERS IN PATIENTS WITH IDIOPATHIC PULMONARY HYPERTENSION VS SECONDARY PULMONARY HYPERTENSION**

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**Introduction:** Right ventricular (RV) function in the assessment of pulmonary hypertension based on different etiologies has not been well studied. In this study we evaluated the RV function in patients with idiopathic pulmonary hypertension (IPH) versus secondary pulmonary hypertension (SPH)

**Method:** Forty-five patients with pulmonary hypertension and New York Heart Association (NYHA) functional classes II or III were enrolled. Of these, 22 were diagnosed as IPH and 23 as SPH. Echocardiographic date including Doppler and Doppler based strain were assessed according to American Society of Echocardiography (ASE) guidelines for detail evaluation of RV function in these two groups.

**Results:** Mean PAP was 60±14.5 mmHg in patients with IPH vs 43±11.5 mmHg in patients with SPH (p=0.001). Considering conventional indexes of RV function, only Sm and dp/dt were significantly better in the first group in comparison to the second one (p-value for Sm=0.042 and for dp/dt=0.039). RV end diastolic dimension was significantly higher in IPH group (p=0.013). Using deformation indexes of RV function, basal and mid portion of RV free wall strain and basal RV strain rates were significantly worsening in SPH group in comparison to the IPH group: p<0.001 in basal RV strain, p=0.034 in mid RV strain and p=0.046 in basal RV strain rate respectively.

**Conclusion:** IPH has less impact on RV function in comparison to SPH. Considering both entities are in the category of RV pressure overload, we conclude that etiology of pulmonary hypertension also play an important role in RV function in addition to pressure overload.