

**SAFETY AND EFFICACY OF USING PRESSURE WIRE WITH DOBUTAMIN INFUSION IN THEMOYNAMIC ASSESSMENT OF LOW FLOW LOW GRADIENT AORTIC STENOSIS**

Poster Contributions

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Background: Current guidelines discourage aortic stenosis (AS) evaluation by direct pressure measurement if echocardiography (echo) is adequate. However several studies show sizable differences between echo and catheterization (cath) lab measurements. Dobutamine Challenge is recommended for evaluation of Low flow/ low gradient (LF/LG) severe aortic stenosis (AS) with reduced EF.

Using pressure wire for aortic stenosis assessment with dobutamine challenge may offer a safe and higher quality technique to assess the severity of AS in LF/LG and NF/LG AS with reduced Ejection Fraction (EF).

Methods: 42 sequential patients with EF < 50%, AVA <1 cm² and SVI <35 ml/m² on echocardiography underwent right and left heart cath with pressure gradients via left ventricular (St. Jude) pressure wire and ascending aorta catheter. Cath derived values were based on simultaneous pressure wire recording of left ventricular pressure and fluid filled pressure catheter recording of aortic pressure measured > 5 cm above the valve at baseline and at maximum dose of Dobutamine. Cardiac output was calculated by thermodilution.

Results: Of these 42 patients, Dobutamine challenge resulted in confirming the presence of true AS in 32 patient (76%) , while Pseudo AS was confirmed in the rest 24%. No significant arrhythmias or profound hypotension was observed during or after the procedure. No clinical strokes or TIA were observed in the 30 days after procedure in any of the patients.

Conclusions: Invasive hemodynamic assessment of AS using a pressure wire and Dobutamine challenge may provide a safe and beneficial tool in identifying true severe in patients with LF/LG AS with Reduced EF.