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**Background** : Pulmonary stenosis (PS) is classified three types; supra-avalvular, valvular and subvalvular type and the treatment of symptomatic severe PS (symptomatic patients with a domed pulmonic valve and peak instantaneous Doppler gradient  $> 50$  mmHg or a mean Doppler gradient  $> 30$  mmHg) depends on this classification. But it is sometimes difficult to detect stenosis site. **Case presentation** : A 77 year-old male with dyspnea on effort underwent TTE (transthoracic echocardiography) that showed accelerated jet, pressure gradient of 60mmHg in RVOT, trileaflet with mild calcification and its area measured by tracing was  $2.5\text{cm}^2$ . PS was suspected by TTE, but we could not classify the type. To diagnose PS and its classification we performed cardiac catheterization. SwanGantz catheter showed max gradient of 54mmHg as same as TTE, but intravascular ultrasonography did not show thickening of leaflet and fusion of commissures. Simultaneous IVUS and pressure wire evaluation revealed the pressure jump up just at the leaflet of valve. PTPV (percutaneous transluminal pulmonary valvuloplasty) was performed for valvular PS with double balloon technique. After the procedure max gradient pressure improved 38mmHg from 54mmHg. **Conclusion** : Our case showed that simultaneous IVUS and pressure wire examination is a useful tool to diagnose PS and its classification.