

Role of Advanced Echocardiography for Low-gradient Aortic Stenosis

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Senile degenerative aortic stenosis (AS) is a common form of valvular heart disease in developed countries, and its prevalence is rapidly increasing along with the aging population. Echocardiography is a gold-standard modality for diagnosing AS. Low-gradient AS, i.e. a small aortic valve area (AVA $<1.0 \text{ cm}^2$) but a low mean transvalvular gradient ($<40 \text{ mmHg}$), may occur with depressed or preserved left ventricular ejection fraction. Up to 40% of patients with aortic stenosis (AS) present with a "discordant grading" usually referred to as low-gradient AS. Management of both conditions is particularly challenging because the aortic valve area-gradient discrepancy increases uncertainty about the actual stenosis severity. The purpose of this session is to demonstrate the role of basic and advanced echocardiography in the diagnosis of this challenging entity, called low-gradient AS.