ment of the AMV. If an upper limit of normal of 0.5 cm² is set for the total area subtended by both leaflets in both views, this criterion is 100% sensitive and 82% specific for the diagnosis of MVP. Conclusions: Though TEE demonstrates greater systolic mitral leaflet displacement in MVP than in NORMAL, there is overlap in the range of superior systolic displacement of the mitral valve into the left atrium between MVP pts and NORMAL subjects. The presence of mild superior systolic displacement of the leaflets relative to the annular hinge points by TEE is inadequate to unambiguously identify MVP pts.

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Accuracy of Aortic Valve Area Measurement by Multplane Transesophageal Echocardiography in Aortic Stenosis

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To determine whether planimetry of the aortic valve opening using multi-plane transesophageal echocardiography (TEE) is accurate, 46 consecutive patients (pts) suffering from calcific aortic stenosis (AS) were enrolled in a prospective study. All the pts, 26 M, 20 F, aged 67 ± 11 yrs (43 to 81) had a transantracoric (TEE) and a multplane TEE using a 5 MHz annular mechanical probe (Vingmed, Norway), within 24 hours before catheterization (cath.). At TTE, aortic valve area (AVA) was calculated by the continuity equation (CE). At TEE, AVA was measured by planimetry of the orifice in a short axis view, obtained with a 70° rotation of the imaging plane from the initial plane, with thorough searching of the smallest orifice as possible in early systole. Numerical images, recorded on optical disks, were analyzed by 2 independent observers unaware of the results of cath. Right and left heart cath. with measurement of simultaneous left ventricle (LV) to aorta gradients (gr) was performed in all pts and AVA was calculated using the Gorlin formula. Valve area measured at TEE and with the CE correlated well with AVA measured at cath.: r = 0.92 for TEE, p < 0.001 and r = 0.83 for CE, p < 0.01.

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Transesophageal Doppler Analysis of Coronary Sinus Flow: A New Method to Assess the Severity of Tricuspid Regurgitation

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Our aim was to assess the differences in the Doppler flow pattern of the coronary sinus (CS) in patients without tricuspid regurgitation (TR) and with mild (MI), moderate (Mo) or severe (Se) TR. For this purpose, 35 patients without TR and 70 patients (mean age 57 ± 8 years, 57% males) with different degrees of TR (27 M, 14 Mo, 29 Se) underwent a prospective study in which the Doppler flow pattern of the CS obtained by transesophageal echocardiography was analyzed. Adequate Doppler signals of the CS were obtained in 22 (63%) patients without TR and in 50 (71%) patients with TR (18 MI [85%], 10 Mo [73%], 22 Se [75%]). The CS flow was analyzed by TEE in a transverse plane, showing its drainage into the right atrium, close to the tricuspid valve.

All patients without TR or with MI TR showed a typical CS Doppler flow pattern with 2 waves, a late systolic one and another diastolic with larger amplitude and velocity. When we analyzed those patients with Se TR, the late systolic flow became reversed (retrograde) and a Color-Doppler turbulent flow in the CS was found in 98% of them. This reversed systolic wave (RSW) was also found in 60% of the patients with Mo TR, all of them with eccentric regurgitation jets. The sensitivity (SE), specificity (SP) and diagnostic accuracy (DA) of the presence of the RSW in the CS for the diagnosis of severe TR was 95%, 62% and 81% respectively.

In conclusion, significant TR modifies the CS flow pattern assessed by transesophageal echocardiography. The presence of a reversed systolic flow in the CS can be a new sign with good SE, SP and DA in the diagnosis of severe tricuspid regurgitation.