Lack of Gender Effect on the Evaluation of Asymptomatic Severe Aortic Stenosis Patients by Stress Echocardiography

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Background: The clinical manifestations of heart disease may be different between genders as in the case of coronary artery disease (CAD). The study aimed to determine whether gender affected the assessment of asymptomatic patients with severe aortic stenosis (SAS) by stress echocardiography.

Methods: Two groups of patients (58 males vs. 42 females) with asymptomatic SAS and good LV function underwent stress echocardiography using treadmill Bruce protocol with careful hemodynamic monitoring. The majority of the patients (63%) had been followed in our valvular clinic for an average period of 52±34 months (similar in each gender).

Results: The two groups had similar baseline- and peak-exercise heart rates, blood pressures, aortic valve severity grade and prevalence of proven CAD. The females were older and achieved a lower exercise grade than the males (Table), nevertheless, 83% of each group performed significant exercise; 80% of the maximal heart rate. There were no significant differences between genders regarding customary exercise-related parameters for the definition of abnormal test in AS (Table). Seventeen females (40%) and 24 males (41%) underwent AVR within similar time periods from the stress echo study (4.5±4.2 vs. 4.6±5.4 months, respectively p=0.9).

Conclusions: The assessment of asymptomatic patients with SAS by stress echocardiography was unaffected by gender. This highlights the study as a useful tool for the assessment SAS patients of both genders.

	Males (n=58)	Females (n=42)	p value
Age (years)	67±12	72±8	0.02
Exercise time (min)	6.1±2.5	4.1±2.2	0.0001
Exercise capacity (METS)	7.5±2.6	5.1±1.6	<0.0001
Dyspnea (%)	31	38.1	0.46
Angina pectoris (%)	8.6	9.5	0.87
ST depression (%)	8.6	4.8	0.45
Abnormal blood pressure response to exercise (%)	60.3	47.6	0.17
ΔAV mean gradient ≥18mmHg post exercise (%)	17.2	9.5	0.33
Abnormal LV contractility in exercise (%)	15.5	7.1	0.2