

Exercise testing to stratify risk in asymptomatic moderate and severe aortic stenosis

Zumreta Kušljagić^{1*}, Fahir Baraković¹, Larisa Dizdarević-Hudić¹, Mirza Dilić², Elnur Smajić¹,
Melika Avdagić¹, Katarina Kovačević-Divković¹, Amira Bijedić¹

¹ University Clinical Center Tuzla, Tuzla, Bosnia and Herzegovina

² Clinical Center University of Sarajevo, Sarajevo, Bosnia and Herzegovina

* Corresponding author phone: +387 (35) 303-500, e-mail: zumreta.kusljagic@ukctuzla.ba

Introduction The literature contains various data regarding the value of the exercise testing in patients with asymptomatic aortic stenosis (AS). The aim: To determine the importance of exercise testing in cardiovascular risk stratification in patients with moderate severe to severe aortic stenosis.

Methods and results Out of a total 33 patients with moderate severe to severe asymptomatic aortic stenosis (mean aortic area EOA $0.9 \pm 0.34 \text{ cm}^2$) we followed up 31 patients (two were excluded) during the 12 months' period by clinical, transthoracic echocardiogram and treadmill stress testing. 18 (58%) patients discontinued the test due to limiting symptoms, and had severe aortic stenosis ($\text{EOA} \leq 0.8 \text{ cm}^2$).

During the follow-up, 11 patients spontaneously developed severe symptoms within 12 months' period, of whom 8 underwent aortic valve replacement, one patient died (sudden cardiac death), and two patients had a stroke. A total of 20 patients remained free of any symptoms. The highest predictive value is $\text{EOA} \leq 0.8 \text{ cm}^2$ for the provoked symptom test and it is 85%. ST depression had the highest negative predictive value.

Conclusion Only limiting symptoms with critical aortic of area ($\text{EOA} \leq 0.8 \text{ cm}^2$) have a positive predictive value.

Keywords Asymptomatic aortic stenosis • Treadmill stress • Testing • Prognosis