

Severe asymptomatic aortic stenosis: management of a patient

 Jasna Čerkez Habek^{1,2*},

 Dean Strinić¹,

 Zrinka Planinić¹,

 Jozica Šikić^{1,3}

¹University Hospital "Sveti Duh", Zagreb, Croatia

²Croatian Catholic University, Zagreb, Croatia

³University of Zagreb, School of Medicine, Zagreb, Croatia

KEYWORDS: aortic stenosis, management.

CITATION: *Cardiol Croat.* 2021;16(9-10):291. | <https://doi.org/10.15836/ccar2021.291>

***ADDRESS FOR CORRESPONDENCE:** Jasna Čerkez Habek, Klinička bolnica „Sveti Duh“, Sv. Duh 64, HR-10000 Zagreb, Croatia. / Phone: +385-91-3712-966 / Email: jasna.habek@gmail.com

ORCID: Jasna Čerkez Habek, <https://orcid.org/0000-0003-3177-3797> • Dean Strinić, <https://orcid.org/0000-0001-6345-2037> Zrinka Planinić, <https://orcid.org/0000-0001-8664-3338> • Jozica Šikić, <https://orcid.org/0000-0003-4488-0559>

Introduction: Calcific aortic stenosis (AS) is a prevalent and worrisome healthcare problem. Patients with symptomatic severe AS have an indication for aortic valve replacement. Indication for operation remains controversial in patients with isolate, asymptomatic severe AS. North American and European guidelines agree on a class I indication for operation in patients with a reduced left ventricular ejection fraction (<50%) but are inconsistent for patients with other disease or comorbid factors¹. The natural history of aortic stenosis should be better quantified to improve understanding of benefits and harms of intervention vs conservative treatment^{2,3}. *Aim:* searching for latest knowledge about management of asymptomatic, severe AS and identification of highest risk patients that will have benefit from early intervention.

Materials and Methods: The meta-analysis of literature search 2370 observational studies with total of 4075 patients comparing an early surgical treatment strategy with watchful waiting¹. The primary end point was all-cause death during long-term follow-up. Meta-analysis was performed on the association of prognostic indicators with the composite of death or aortic valve intervention found in multivariable models.

Conclusion: The optimal management strategy for asymptomatic patients with severe aortic stenosis remains unclear. Data suggest that many patients with asymptomatic severe AS develop an indication for aortic valve intervention, and their deaths are mostly cardiac but not only sudden. Meta-analysis indicates that intervention was associated with a significant reduction in all-cause mortality during follow-up. Variables associated with mortality-related outcomes indicates that prognosis is significantly worse if global longitudinal strain or valvulo-arterial impedance is present even with a preserved LV function, if AS is more severe as measured by higher valve gradient and lower valve area, and if atherosclerotic risk factors, such as dyslipidemia or diabetes, are present.

RECEIVED:
July 26, 2021

ACCEPTED:
August 5, 2021



LITERATURE

1. Gahl B, Çelik M, Head SJ, Vanoverschelde JL, Pibarot P, Reardon MJ, et al. Natural History of Asymptomatic Severe Aortic Stenosis and the Association of Early Intervention With Outcomes: A Systematic Review and Meta-analysis. *JAMA Cardiol.* 2020 Oct 1;5(10):1102-1112. <https://doi.org/10.1001/jamacardio.2020.2497>
2. San Román JA, Vilacosta I, Antunes MJ, Iung B, Lopez J, Schäfers HJ. The 'wait for symptoms' strategy in asymptomatic severe aortic stenosis. *Heart.* Dec 2020;106(23):1792-1797. <http://dx.doi.org/10.1136/heartjnl-2020-317323>
3. Kvaslerud AB, Santic K, Hussain AI, Auensen A, Fiane A, Skulstad H, et al. Outcomes in asymptomatic, severe aortic stenosis. *PLoS One.* 2021 Apr 7;16(4):e0249610. Published 2021 Apr 7. <https://doi.org/10.1371/journal.pone.0249610>