

The role of obesity in the development and progression of aortic stenosis

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Aortic stenosis (AS) is the most common valvular heart disease in the elderly, associated with high morbidity and mortality. Its pathophysiology involves inflammation, fibrosis, and calcification of the aortic valve. At the same time, the global prevalence of obesity continues to rise at an alarming rate, becoming one of the most significant public health concerns. Recently, obesity has emerged as an important risk factor influencing AS development. Obesity affects hemodynamics, promotes systemic inflammation, and alters metabolism, potentially accelerating the progression of valvular degeneration. Epidemiological studies, including the Cohort of Swedish Men and the Swedish Mammography Cohort, have shown a significant association between body mass index (BMI), waist circumference (WC), and the risk of clinically significant AS¹. According to a study by Kontogeorgos *et al.*² women with overweight or obesity have an increased likelihood of being diagnosed with aortic stenosis, with elevated risk observed even in those with high-normal BMI values. Recently published data from the Copenhagen General Population Study indicated an association between genetically determined obesity and the risk of developing symptomatic aortic stenosis and the need for intervention, independent of traditional cardiovascular risk factors³. However, obesity remains a long-term risk factor for cardiovascular and metabolic complications. glucagon-like peptide-1 (GLP-1) and gastric inhibitory polypeptide (GIP) receptor agonists, used for type 2 diabetes and obesity, may provide cardiovascular benefits, but their role in AS remains uncertain⁴. More research is needed to determine their impact on AS progression and outcomes. Given the link between obesity and AS, prevention and treatment of obesity are key. Identifying obesity as a modifiable risk factor may support earlier detection and more effective management of AS risk.

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LITERATURE

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