

## AORTIC STENOSIS AND TAVI

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**Abstract:** Introduction: Aortic stenosis is a serious valvopathy, which must be opted for transcatheter implantation of the aortic valve (TAVI) as a treatment in risk patients. Methodology: qualitative literature review based on articles published in PubMed, Scielo and Google Scholar. Discussion: Aortic stenosis evolves in the long term with left ventricular hypertrophy, diastolic dysfunction and increased risk of heart failure, with high mortality in untreated asymptomatic patients. In this sense, treatment must be prioritized and, in the case of patients at risk, TAVI has proven to be the best alternative. Conclusion: the treatment of aortic stenosis is essential and TAVI showed benefits for high-risk patients. **Keywords:** Aortic Stenosis, Transcatheter Aortic Valve Implantation, Minimally Invasive Procedures.

## **INTRODUCTION**

Aortic stenosis (AS) is the most prevalent severe valve disease in the population, characterized by the inability to fully open the aortic valve. The gold standard of treatment is valve replacement surgery, but in risk patients, transcatheter aortic valve implantation (TAVI) is a better alternative.

## **METHODOLOGY**

The present study is a literature review in which articles were selected in the Scielo, Pubmed and Google Scholar databases, from 2019 to 2022, in English and Portuguese, using the Mesh and Decs descriptors “ Aortic Estenose “, “TAVI” and “Aortic Stenosis”.

## **DISCUSSION**

AS is related to a degenerative and atherosclerotic process in which the aorta becomes more rigid, decreasing its elastic capacity and increasing the velocity of the aortic pulse wave and cardiac afterload. Initially, there is hemodynamic compensation,

but with increasing pressure overload, there is left ventricular hypertrophy, followed by diastolic dysfunction and an increased risk of heart failure, factors that result in a 50% mortality rate in untreated asymptomatic patients. In view of this, it is necessary to treat AS, and although valve replacement surgery is the most common, it is not indicated for people who have high-risk conditions, such as advanced age, previous heart surgery, lung disease chronic disease, stroke, renal failure, since the length of stay and hospital complications are greater. In this sense, TAVI becomes a great option, since it is a less invasive, low-risk and satisfactory procedure. This is corroborated by means of a systematic review carried out by Follador W. et al., in which 5.7% of high-risk patients undergoing normal surgery died during the procedure, 4%

were affected by stroke and 23.8% had major bleeds, while patients undergoing TAVI had an important 13% reduction in death from all causes. Along with this, another study demonstrated that the structural deterioration of the valve in patients at risk was significantly lower in the TAVI group compared to the surgical group.

## CONCLUSION

Based on the bibliographical analysis, it can be inferred that AS is a serious pathology that requires essential treatment. TAVI showed benefits in terms of lower rates of death, bleeding and stroke, when compared with valve replacement surgery. In addition, it also had positive impacts on the survival of high-risk patients undergoing surgical treatment for AS.

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