

Bystander coronary artery disease in patients scheduled for transcatheter aortic valve implantation

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Introduction: In stable patients planned for transcatheter aortic valve implantation (TAVI), systematic screening for coronary artery disease (CAD) and routine percutaneous coronary intervention (PCI) of angiographically significant lesions before TAVI has been considered a standard of care.¹ However, recent analyses showed no evidence of benefit after coronary revascularization before TAVI in stable patients.

Patients and Methods: We retrospectively analyzed all patients who underwent TAVI in our center from 2012 to 2022. Data on coronary artery disease (CAD) diagnosis and management were compared to other relevant clinical characteristics, in regard to composite event rate of death and myocardial infarction during follow-up.

Results: Among 293 patients (median age 80 years, 53% males, median AVA 0.7 cm², with 62% of balloon expandable valves), 105 (36%) had confirmed CAD. History of previous revascularization (PCI or surgical) was noted in 84 (29%) of patients. Routine coronary angiography before TAVI was performed in 280 (96%) patients, with significant CAD deserving clinical attention found in 63 (23%) patients. Composite event rate of death and myocardial infarction during follow-up was not significantly higher among patients with confirmed CAD (OR 0.93, 95% CI 0.54-1.58), in contrast to peripheral artery disease (OR 3.25, 95% CI 1.91-5.54). Among 63 patients with significant CAD, 41 (65%) patients received PCI before TAVI, and their composite event rate did not differ from the remaining 35% of patients treated conservatively (OR 0.86, 95% CI 0.27-2.80).

Conclusion: Stable CAD showed no impact on survival or myocardial infarction after TAVI, as well as routine PCI before TAVI in a subgroup of patients with significant CAD requiring clinical attention. Therefore, in a cohort of patients with similar characteristics, routine invasive coronary angiography during diagnostic work-up before TAVI could be redundant because invasive CAD management did not impact clinical outcomes.

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LITERATURE |

1. Amat-Santos IJ, Blasco-Turrión S, Ferrero V, Ribichini FL. PCI of bystander coronary artery lesions should be performed before TAVI: pros and cons. *EuroIntervention.* 2022 Nov 18;18(10):783-785. <https://doi.org/10.4244/EIJ-E-22-00038>