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Titel des Beitrags: Aortic valve calcium score as a predictor for outcome after TAVI using the CoreValve revalving system.

Abstract: TAVI is a novel treatment option for patients at too high risk for surgery. Risk scores for surgical valve replacement failed to accurately predict outcomes after TAVI and alternative risk parameters are lacking so far. We evaluated the CT-derived aortic valve calcification score as a predictor for outcome during and after TAVI. Transfemoral TAVI using the CoreValve device was performed in 68 patients, in whom the aortic valve calcium score was determined from preprocedural 64-slice ECG gated CT-scans. 30-day MACE rate (death, stroke, MI) was 10.3%, 1-year mortality was 11.8%. Using linear regression analysis the aortic valve calcium score was the only significant predictor for 30-day MACE and for 1-year mortality and was also associated with the incidence and severity of post procedural aortic regurgitation (r=0.33, p<0.05). The aortic valve calcium score had a significant lower 1-year survival rate compared to patients with scores<750 (58% vs. 98%, p<0.05). The aortic valve calcium score is also inversely associated with the absolute improvement of NYHA-class after TAVI (regression coefficient=-0.43, p<0.02). The degree of aortic valve calcification is associated with post procedural aortic regurgitation, procedural complications, 1-year mortality and with the degree of functional improvement of patients who underwent TAVI using the CoreValve device. Due to the fact that...
the aortic valve calcium score can be determined from CT-datasets that are used for preprocedural planning, this parameter may be incorporated in the general work up and may be used for risk stratification and patient selection.