measurements to follow-up, there was no significant improvement in CFR immedi-
ately post TAVI (mean % BCFR pre TAVI to immediately post TAVI 8.6%, 95% CI
-23.0 – 40.3%, p = 0.41).

Conclusions: TAVI does improve coronary flow dynamics as measured by CFR. This
improvement does not occur immediately, but requires a period of time post-TAVI to
manifest. The improvement in coronary flow reserve may represent a mechanism by
which both symptoms and prognosis improve following TAVI.

TCT-734
Percutaneous Implantation of Stent Grafts in the Management of Vascular Complications in Transfemoral Transcatheter Aortic Valve Implantation
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Background: Vascular complications remain to be the most prevalent adverse event associated with transfemoral TAVI and related to increased morbidity and mortality. Percutaneous implantation of stent grafts in the management of access-site related vascular complications is not widely studied.

Methods: Among 379 patients who underwent TAVI from November 2007 to December 2011 for severe aortic stenosis, transfemoral access was performed in 314 patients (82.7%). Clinical closure and consequently pure percutaneous transfemoral TAVI was performed in 304 patients. We described the clinical outcomes of this patient cohort who developed access-site related vascular complications and were subsequently managed by percutaneous implantation of stent grafts. We also compared their baseline and procedural characteristics, as well as in-hospital outcomes with those without vascular complications.

Results: Access site-related vascular complications occurred in 68 (22%) patients. 8 patients were managed surgically and 18 by manual compression. The remaining 42 patients with access site-related complications were managed by percutaneous means, in which 29 were treated solely by implantation of stent grafts. Overall, stent graft implantation was successful in all cases. The rate of VARC-defined endpoints was similar between patients managed by stent graft implantation and those free of vascular complications. After a median follow-up of 19.2 months, 9 patients underwent duplex ultrasonography of the intervened limb and the remaining patients underwent clinical assessment. Duplex ultrasonography revealed no evidence of obstructive flow. Moreover, no patient experienced lower limb ischemic symptoms during follow-up.

Conclusions: Access-site related vascular complications in transfemoral TAVI can be managed by implantation of stent grafts with an encouraging technical success rate and safety profile. The clinical outcomes in these patients are similar to those who have undergone transfemoral TAVI without vascular complications. However, more dedicated imaging and larger clinical trials are needed to define the applicability of stent grafts in the treatment of vascular complications in TAVI.

TCT-735
Can we Predict Post-Procedural Paravalvular Leak After Edwards Sapien Transcatheter Aortic Valve Implantation?
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Background: Post-procedural PVL ≥ 2 has been shown to be associated with worse mid-term outcomes after TAVI. Valve calcification and optimal valve sizing may play an important role in this setting. This study sought to identify predictive factors of post-procedural paravalvular leakage (PVL ≥ 2) after transcatheter aortic valve implantation (TAVI) with the Edwards valve.

Methods: A total of 176 Edwards TAVI patients (aged 83.4 ± 6.7 years, Logistic EuroSCORE 18.8 ± 12.0%, transatlantic 54.5%) who had preprocedural multislice computed tomography (MSCT) were studied. In order to assess the role of valve calcification, a new Valve Calcium Index (VCI) was defined using MSCT as aortic root calcification volume / aortic annulus area. Optimal valve sizing was defined as: (1) Valve diameter = calculated annular average diameter (C Aad) by MSCT; (2) PVL ≥ 2 after dilatation, performed in 16.7% of cases, a PVL ≥ 2 was observed in only 12.5% of cases. A 1-year estimated survival of both PVL < 2 and PVL ≥ 2 groups was 95.3 ± 2.1% vs 79.0 ± 10.8% (log-rank p = 0.02), respectively. Only the VCI odds ratio (OR) 2.11, 95% confidence interval (CI) 1.27 to 3.51, p < 0.01) and the valve diameter / C Aad (OR 0.57, 95% CI 0.38 to 0.87, p = 0.01), were identified as independent predictors of post-procedural PVL ≥ 2. A score predicting post-procedural PVL ≥ 2 (PVL score) was determined by assigning one point when the VCI odds ratio was < 1.05 and one point when VCI was > 2.05, and summing all points accrued. Area under receiver-operator characteristic curves of PVL score were 0.70 (95% CI 0.58 to 0.82, p < 0.001). The incidence of PVL ≥ 2 in patients with a PVL score of 0 was 5.5%, 1 was 16.7% and 2 was 38.5%, respectively.

Conclusions: The only predictors of PVL ≥ 2 after Edwards valve implantation are the valve diameter / C Aad and VCI. The use of these two simple parameters, could become an excellent tool to predict the risk of PVL.