There is currently no consensus on the duration of monitoring required after TAVI. Between october 2009 and november 2013, 371 consecutive patients underwent transfemoral TAVI in our institution, all performed using the Edwards SAPIEN-XT prosthesis and local anesthesia.

All the patients were monitored in intensive care unit for at least 24 hours after TAVI. We excluded 12 Patients implanted with a Corevalve, 14 patients who died before discharge, and 8 patients who were not discharge d straight home.

The remaining 337 patients were discharged at home, 121 (36%) within 3 days (early discharge group) and 216 (64%) more than 3 days after TAVI (conventional discharge group).

The primary end point combined death and re-hospitalization at 30 days. All adverse events were adjudicated according to the Valve Academic Research Consortium-2.

The incidence of early discharge rose from 0% in 2009 to 53.2% of cases in 2013. Before (plutôt prior to?) TAVI, patients in the early discharge group were less symptomatic (NYHA ≥III: 64.5% vs. 75.5%, p=0.01) and had less renal failure (creatinine: 102.1±41.0 vs. 113.3±58.9µmol/l, p=0.04), less atrial fibrillation (33.1% vs. 46.3%, p=0.02), and less previous balloon aortic valvuloplasty (11.6% vs. 23.1%, p=0.01) than those in the conventional discharge group. In contrast, patients in the early discharge group were more likely to have a pacemaker before TAVI (16.5% vs. 8.3%, p=0.02).

After multivariable analysis, pacemaker before TAVI (OR 0.44; 95% CI 0.19-0.99; p=0.05), previous balloon aortic valvuloplasty (OR 2.26; 95% CI 1.10-4.64; p=0.03), transfusions (OR 9.6; 95% CI 2.36-38.94; p=0.002), and delta creatinin (OR 0.99; 95% CI 0.98-0.99; p=0.02) were independent predictive factors of early discharge. The primary end-point occurred in 7 (5.8%) patients in the early discharge group and in 16 (7.1%) patients in the conventional discharge group without significant difference (p=0.60). No patients died in the early discharge group at 30-day follow-up.

The results of our study suggest that early discharge is feasible and safe after TAVI using the Edwards-SAPIEN XT prosthesis in selected patients

0353

Impact of TAVI on primary hemostasis, von Willebrand factor and Heyde's syndrome: a prospective monocenter study

Thibault Caspar (1), Laurence Jesel (1), Dominique Desprez (2), Lélia Grunebaum (2), Hafida Samet (1), Annie Trinh (1), Hélène Petit-Eisenmann (1), Michel Kindo (3), Patrick Ohlmann (1), Olivier Morel (1)
(1) CHU Strasbourg, Cardiologie, Strasbourg, France – (2) CHU Strasbourg, Laboratoire d'hématologie, Strasbourg, France – (3) CHU Strasbourg, Chirurgie cardiaque, Strasbourg, France

Background: Aortic valve stenosis (AVS) can be complicated by bleeding associated with acquired type 2A von Willebrand syndrome. The association of AVS and gastrointestinal bleeding from angiodysplasia is defined as Heyde's syndrome. We sought to evaluate the impact of TAVI on primary hemostasis disorders and to assess its effectiveness to treat Heyde's syndrome.

Methods: We prospectively enrolled 49 consecutive patients with severe AVS referred to our institution for TAVI. Biological primary hemostasis parameters were assessed at baseline and one week after the procedure.

Results: At baseline, a significant link between vWF abnormalities and the severity of AVS was evidenced: mean aortic transvalvular gradient was negatively correlated with the levels of vWF antigen (vWF: Ag) (r=–0.29, p<0.05), vWF ristocetin cofactor activity (vWF:RCo) (r=–0.402, p=0.006) and vWF collagen-binding activity (vWF:CB) (r=–0.441, p=0.005). One week after the procedure, a significant increase of vWF:Ag, vWF:RCo, and vWF:CB was evidenced in the whole cohort (respectively 3.32 vs 2.29 IU/mL, p<0.001; 2.98 vs 1.86 IU/mL, p<0.001; 3.16 vs 2.16 IU/mL, p<0.001). Patients with pre-TAVI vWF abnormalities consistent with a type 2A vWF syndrome (ratio vWF:CB/vWF:Ag <0.7) preferentially improved their vWF function with respect to patients with a normal ratio (relative increase of vWF:CB of 63.8% vs 3.5%).

Conclusion: Primary hemostasis parameters involving vWF are improved after TAVI, especially in patients with preexisting abnormalities consistent with acquired type 2A von Willebrand syndrome. Moreover, our observations, although limited to a small single-center study, suggest that Heyde's syndrome can be cured by TAVI.

0081

Prevalence and determinants or right ventricular dysfunction in severe aortic stenosis

Elena Galli, Yvan Guirette, Magalie Daudin, Vincent Auffret, Maxime Fournet, Philippe Mabo, Erwan Donal
CHU Pontchaillou, Cardiologie, Rennes, France

Introduction: systolic pulmonary artery pressure (sPAP) is a well known predictor of outcome in patients with valvular heart disease. In spite of this fact, limited data are available regarding the assessment of RV function in patients with aortic stenosis (AS).

Aim: of this study is therefore to evaluate the prevalence and the determinants of RV dysfunction in severe AS patients

Methods: 201 patients (mean age:79.7±8.7, male sex 55.5%) with severe AS underwent 2D echocardiography and speckle tracking echocardiography (STE) for the evaluation of left ventricular and RV function, aortic valve gradients and sPAP. A tricuspid annular plane systolic excursion (TAPSE) ≤17mm was used to define reduced RV ventricular function.

Results: RV function was impaired in 48 patients (24%). Patients with reduced TAPSE had an impaired LV ejection fraction (LVEF) (49.2±15.4 vs 57.9±10.9%, p<0.0001), significantly altered STE parameters (GLS: –10.3 ±3.9 vs –13.2±3.5%, GCS: –7.0±3. vs –10.4±4.9%, GRS: 18.7±11.6 vs 28.4±15.6, all p<0.001) and a higher sPAP (48.4±15.8 vs 40.9±12.7 mmHg, p=0.002) with respecto to patients with a normal RV function. Correlates of a reduced TAPSE were: LVEF (β=0.35, p<0.0001), LV global longitudinal, circumferential and radial strain (β=–0.40, β=–0.40, β=0.37 respectively, all p<0.0001), LV indexed stroke volume (β=0.44, s<0.0001), lnNT-proBNP (β=–0.51, p<0.0001) and sPAP (β=–0.27, p<0.0001). At Kaplan-Meier survival curve, a TAPSE ≤17mm was associated with a reduced survival in patients with AS (Log Rank test, p=0.034).

Conclusions: In patients with severe AS, RV function impairment is frequent and is associated with a poor prognosis. The correlations of TAPSE highlight the RV-LV interdependence in AS patients. Further studies will clarify the real and independent prognostic value of RV function in severe AS patients and test for the RV reverse remodelling after treatment of the AS.

0085

Risk stratification in severe aortic stenosis: the importance of ventriculo-arterial interplay

Elena Galli (1), Emmanuel Oger (2), Yvan Guirette (1), Philippe Mabo (1), Erwan Donal (1)
(1) CHU Pontchaillou, Cardiologie, Rennes, France – (2) CHU Pontchaillou, Pharmacologie, Rennes, France

Introduction: in patients with aortic stenosis (AS), the occurrence of adverse outcomes does not always correspond to the classical markers of haemodynamic severity. Moreover, the evaluation of outcomes in these patients is often biased by considering surgery as a censor event at follow-up analysis. Aim of the present study is therefore to evaluate the determinants of prognosis in patients with severe AS, independently from the treatment modality (aortic valve replacement/medical therapy).

Methods: 220 patients (mean age: 79.8±8.6 years, male sex: 119, 54%) with severe AS (aortic valve surface <1cm^2 or <0.6cm^2/m^2) underwent standard echocardiography to characterize aortic valve gradients and biventricular function. Hospitalization for cardiac cause, heart failure, overall death, but not intervention on the aortic valve were considered as major adverse cardiac events (MACEs).

Results: after a mean follow-up period of 7.8 months, the predefined MACEs occurred in 57 patients (26%). At Cox regression analysis, LVESV (HR 1.20, p=0.0025), age (HR 0.79, p=0.03), female sex (HR 1.43, P=0.05) and a ZV_a>3.2 mmHg/ml/m^2 (HR 3.53, p<0.0001) were the strongest predictors of events.

Conclusions: In patients with severe AS, a ZV_a >3.2 mmHg/ml/m^2 is the strongest predictor of prognosis, independently from the treatment modality. The ventriculo-arterial interplay has thus a fundamental role in AS, defining the natural history of the disease and suggesting that a careful reduction of LV afterload could be very useful in the clinical management of these patients.