

and the incidence of adverse outcomes in patients receiving either VinV or re-SAVR.

Methods: All patients (pts) receiving either VinV or re-SAVR for a degenerated bioprosthesis in aortic position (excluding pts with active endocarditis) between 01/2006 and 05/2016 were included in the analysis. We defined all-cause-30-day and 1-year mortality as the primary end points. Continuous variables are displayed median (IQR). All end point definitions were according to the Valve Academic Research Consortium -2 definitions.

Results: Overall, 229 pts were treated for aortic valve prosthesis failure, with 121 receiving VinV and 108 receiving re-SAVR. Pts receiving VinV had a higher STS-PROM (7.1% (4.2; 9.9) vs. 2.0% (1.5; 3.3), $p < 0.01$), were older (78 years (73; 82) vs 60 years (47; 71), $p < 0.01$) and had lower baseline GFR (62.2 ml/min/1.73m² (46.9; 73.6) vs. 77.9 ml/min/1.73m² (62.2; 89.9), $p < 0.05$). Baseline ejection fraction did not differ significantly between groups (58% (46.0; 65.0) vs. 60% (50.3; 65.0), $p = 0.308$).

Duration of postoperative stay was shorter for pts receiving VinV (10 days (8; 13) vs. 12 days (9; 15), $p < 0.01$). Compared to VinV, re-SAVR had a higher rate of life threatening bleeding events (5.5% vs 13.9%, $p < 0.05$) and a significantly higher incidence of renal failure (any renal failure: 13.2% vs 32.4%, $p < 0.01$; stage 3 renal failure: 4.1% vs 12.0%, $p < 0.05$). There were no significant differences regarding periprocedural myocardial infarction (4.2% vs 1.9%, $p = 0.45$), stroke (any stroke: 7.5% vs 7.5%, $p = 1.0$) or need for permanent pacemaker implantation (17.4% vs 13.9%, $p = 0.586$).

30-day mortality (4.1% (VinV) vs. 4.6% (re-SAVR), $p = 0.882$) and 1-year mortality (7.4% (VinV) vs. 12.0% (re-SAVR), $p = 0.182$) did not differ significantly between groups.

Conclusion: Despite a higher risk profile in VinV, 30-day and 1-year mortality rates were not different compared to re-SAVR which might be explained by a higher complication rate in re-SAVR. VinV seems to be a safe and feasible therapeutic option for patients with degenerated aortic bioprosthesis. A randomized controlled clinical trial is necessary to elucidate the impact of VinV vs. re-SAVR on functional outcome and mortality.

235

Stroke and bleeding risk scores in patients with atrial fibrillation and valvular heart disease: prospective validation of the EHRA classification in a nationwide cohort study

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Background: Substantial interest has been directed towards stroke risk stratification in patients with atrial fibrillation (AF) but prior studies have focused on AF without significant valvular heart disease (VHD), so-called "nonvalvular AF". We are unaware of any formal validation exercise addressing stroke risks in relation to the CHA2DS2VASc risk factor(s) in AF patients with VHD. Also, the use of the HAS-BLED score in anticoagulated patients with VHD has not been previously studied.

Objective: To investigate stroke and bleeding rates in AF patients with VHD in relation to the CHA2DS2VASc and HAS-BLED scores.

Methods: Nationwide cohort study. VHD were categorised based on the 2017 joint European consensus document definition, ie. Evaluated Heartvalves,

Rheumatic or Artificial (EHRA) categorization (Europace. 2017; 19:1757–1758): (i) EHRA Type 1 VHD, which refers to AF patients with VHD needing therapy with a Vitamin K antagonist (VKA), thus including severe native mitral stenosis and prosthetic mechanical heart valves; and (ii) EHRA Type 2 VHD, which refers to AF patients with VHD needing therapy with a VKA or a Non-VKA oral anticoagulant (NOAC), thus including all other forms of VHD.

Results: We identified 25,818 AF patients with VHD with EHRA Type 2 in 90% (n=23,253). Thromboembolism and bleeding events increased with increasing CHA2DS2VASc and HAS-BLED scores, whether with 1 or 2.5 years follow-up. EHRA Type 1 outcomes: The predictive value of CHA2DS2VASc score for thromboembolism was modest, c-indexes 0.61 (0.54–0.69) at 1 year [Figure]. The predictive value of the HAS-BLED score for bleeding was also modest being 0.59 (0.53–0.65) at 1 year. EHRA Type 2 outcomes: The predictive value of CHA2DS2VASc score for thromboembolism was modest, c-indexes 0.63 (0.60–0.66) at 1 year. The predictive value of the HAS-BLED score for bleeding was also modest being 0.61 (0.58–0.63) at 1 year.

Conclusion: This is the first validation of CHA2DS2VASc and HAS-BLED scores in AF patients with VHD (so-called "valvular AF"). Both scores are modestly predictive of thromboembolism and bleeding events in VHD, respectively. Event rates increased with increasing risk factors as evident by increasing CHA2DS2VASc and HAS-BLED score points, consistent with performance of these clinical scores in "non-valvular AF" patients.

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236

Impact of tricuspid regurgitation on long-term survival in patients after percutaneous mitral valve repair

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Background: Functional tricuspid regurgitation (TR) is a common finding in patients with severe mitral regurgitation. Current guidelines recommend tricuspid valve repair in presence of TR \geq II if patients undergo left-sided heart surgery since it is associated with worse survival and a high incidence of heart failure. While percutaneous mitral valve repair (PMVR) is on the advance, the role of concomitant TR remains unclear.

Purpose: This study was aimed to investigate the impact of TR on long-term survival in patients after PMVR.

Methods: We enrolled 175 consecutive patients with previous PMVR who presented during the years 2010 to 2016. TR grade was determined in transthoracic echocardiography according to current guidelines. Dichotomized groups (no/mild TR and moderate/severe TR) were analyzed using Cox regression model and Kaplan Meier estimator for survival analysis.

Results: Among all patients 6 (3,4%) showed no, 97 (55,4%) mild, 55 (31,4%) moderate, and 17 (9,7%) severe TR. Patient characteristics are shown in table 1. Overall survival rate was 78,3% at one year, 50,3% at three years after PMVR. Proportional hazards model revealed NYHA class III and IV (HR 2,4; $p = 0,012$ and HR 3,267; $p = 0,005$), age (HR 1,06; $p < 0,001$), and TR grade (HR 1,67; $p = 0,031$) as independent predictors for mortality, also taking into consideration sex, pulmonary hypertension, chronic kidney disease, atrial fibrillation, coronary artery disease, arterial hypertension, and chronic obstructive pulmonary disease. TR

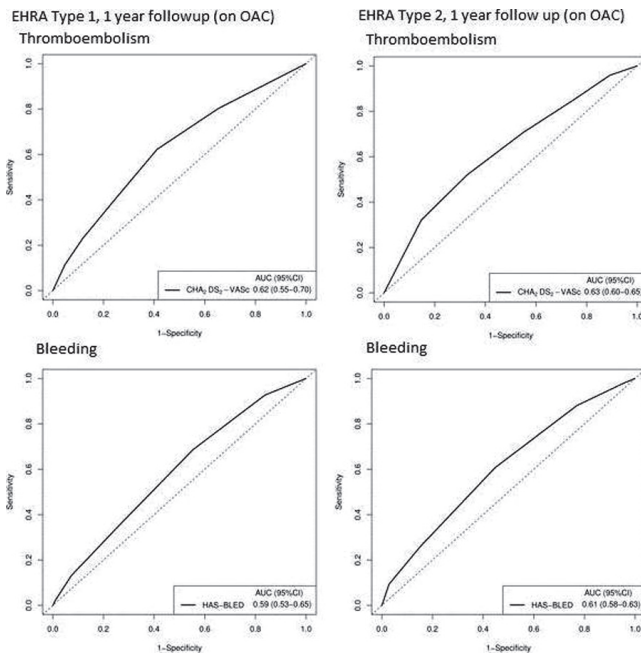


Figure 1

Table 1. Patient characteristics

	No/mild TR	Moderate/severe TR	p value
Age [years]	74±9	76±8	0,147
Male [%]	70,9	63,9	
NYHA class [%]			
I	1,9	0	
II	2,9	11,1	
III	56,3	50,0	
IV	15,5	25,0	

Values for age are years, for sex and NYHA class percentages.

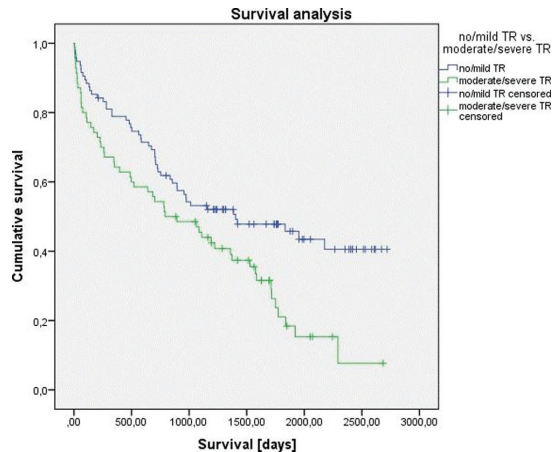


Figure 1. Survival dependent on TR grade.

grade \geq II was associated with adverse outcome in Kaplan Meier analysis (overall all cause mortality), Log Rank, Chi square 8,18, $p=0,004$, see figure 1. NT-proBNP levels were significantly higher in patients with TR \geq II (Mdn 2596 pg/ml IQR 3375 vs. Mdn 4104 pg/ml IQR 7132; $p=0,004$).

Conclusion: In patients with PMVR TR severity is associated with increased mortality. According to this study a coincident TR is an important modifier of patient survival after PMVR. New approaches for concomitant percutaneous treatment of TR should be pursued in the future.

237

Prevalence of infective endocarditis in enterococcus faecalis bacteraemia: a prospective multicenter screening study

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Background: Enterococcus faecalis (E. faecalis) is one of the most frequent causes of infective endocarditis (IE). Despite this, no systematic prospective studies have examined the prevalence of IE in patients with E. faecalis bacteraemia.

Purpose: To establish the prevalence of definite IE in an unselected population of patients with E. faecalis bacteraemia.

Methods: January 1, 2014–December 31, 2016 we performed a prospective multicenter study with echocardiography in all patients with E. faecalis bacteraemia in 10 hospitals. Predictors of IE were identified with multivariable logistic regression.

Results: We included 344 patients with E. faecalis bacteraemia all examined by echocardiography including transoesophageal echocardiogram in 74%. The prevalence of definite IE was 26% \pm 4% (95% CI). Age, sex and co-morbidity were comparable in patients with and without IE, Table 1. Community acquired infection, unknown origin of infection, prosthetic heart valve, immunosuppression, monomicrobial bacteraemia and \geq 3 positive blood culture bottles were independent risk factors of endocarditis, Figure 1. Complications and relapse were significantly more common in patients with IE and approximately 20% of the patients with IE underwent cardiac surgery, Table 1. In-hospital mortality was higher in patients with endocarditis whereas if discharged alive the patients with IE had a significantly lower 1-year mortality, Table 1.

Table 1. Patients with endocarditis vs. patients with bacteraemia only

Characteristic	Endocarditis (N=90)	No endocarditis (N=254)	P value
Age, yr	74.6 \pm 12	74.1 \pm 13	0.716
Male sex, no. (%)	71 (79)	182 (72)	0.181
Charlson comorbidity index, mean	2.5 \pm 2	3.0 \pm 2	0.083
Acute heart failure, no. (%)	8 (9)	0	<0.001
Osteomyelitis, no. (%)	6 (7)	2 (1)	0.005
Stroke, no. (%)	8 (9)	5 (2)	0.007
Other embolic event, no. (%)	7 (8)	1 (0.4)	<0.001
Heart valve surgery, no. (%)	17 (19)	0	<0.001
Pacemaker removal, no. (%)	8 (9)	0	<0.001
Relapse bacteraemia 1-year, no. (%)	14 (16)	15 (6)	0.005
Mortality in-hospital, no. (%)	16 (18)	25 (10)	0.046
Mortality 1-year from discharge, no. (%)	17 (23)	82 (36)	0.041

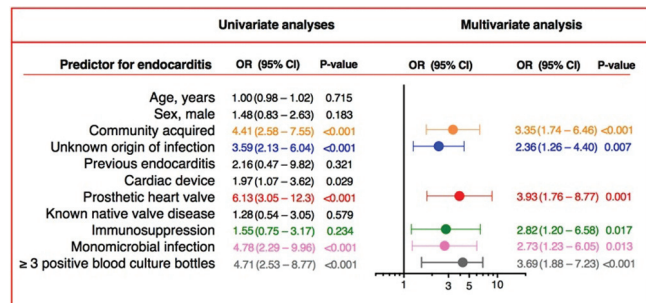


Figure 1. Risk factors for endocarditis

Conclusions: We found a high prevalence of 26% infective endocarditis in patients with Enterococcus faecalis bacteraemia. Echocardiography should be considered in all patients with E. faecalis bacteraemia.

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P238

Sedentary lifestyle patterns and their impact on carotid arterial atherosclerotic burden: insights from the Corinthia study

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Introduction: Leisure time physical activity (PA) has been associated with favorable effects on cardiometabolic risk factors. On the contrary, sedentary lifestyle is associated with atherosclerosis progression. Watching television is a major component of sedentary lifestyle, along with reading books or office activities. Few data exist regarding the interrelationship between sedentary behavior patterns and cardiovascular disease burden.

Purpose: To examine the impact of different components of sedentary lifestyle on carotid atherosclerotic burden.

Methods: Corinthia study is a cross sectional epidemiological study based on 2043 inhabitants (age 40–99years) of Corinthia region in Greece. Ultrasonography was used to measure IMT in the left and right common carotid artery, carotid bulb and internal carotid artery. The average of the measurements (meanIMT) and the maximum thickness (maxIMT) were determined as representative values of carotid atherosclerosis burden. We evaluated PA using the self-reported International Physical Activity Questionnaire (IPAQ) and we calculated totals METS/week for each participant. Based on questionnaires of Corinthia study, sedentary activities were recorded based on hours/week spent on reading or office activities (ReadHours) and on hours spent watching TV (TVhours).

Results: The mean age of the participants was 63 \pm 12years. The median ReadHours was [3 95% CI (0–14) hours/week]. The median TVhours was [7 95% CI (7–28)hours/week] and the median METS/week 631 (0–2190). In our study population there was no significant difference according to gender for ReadHours ($p=0.11$), for TVhours ($p=0.37$) and for total METS/week ($p=0.86$). Interestingly, there was no significant association of METS/week with meanIMT ($\rho=-0.12$, $p=0.68$) and maxIMT ($\rho=-0.04$, $p=0.88$). However, there was a positive association between TVhours and meanIMT ($\rho=0.141$, $p<0.001$) and with maxIMT ($\rho=0.13$, $p<0.001$). On the contrary Readhours were inversely correlated with meanIMT ($\rho=-0.107$, $p=0.002$) and maxIMT ($\rho=-0.099$, $p=0.005$). Since several confounders may exist, we applied a linear regression model to adjust for age, gender, BMI, smoking habits, hypertension, diabetes mellitus, hypercholesterolemia and history of cardiovascular disease. We found a positive association between maxIMT and TVhours [$b=0.008$, 95% CI (0.003, 0.13), $p=0.002$] and a negative association between ReadHours and MaxIMT [-0.005 95% CI (-0.10, 0.001), $p=0.05$]. Similar findings were observed concerning the association of meanIMT with TVhours and with ReadHours (Figure 1).

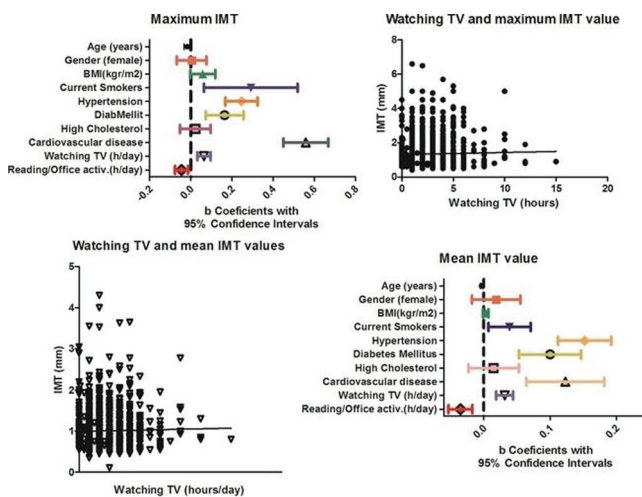


Figure 1

Conclusion: Different sedentary behavior components affect distinctively atherosclerosis progression. Leisure time spent in watching television is associated to more extensive carotid atherosclerotic burden while reading books or office activities may have a favorable result. These data may be important to understand the complicated interplay between sedentary lifestyle and atherosclerosis progression.