in DM patients remained significantly higher than in those without DM (24% vs 16%; hazard ratio (HR): 1.62, 95% CI[1.22–2.16], p=0.01). At two-years follow up, cardiovascular mortality continued to be higher in DM patients as compared to non-DM subjects (25% vs 17%; HR: 1.57, 95% CI[1.19–2.06], p=0.01).
Conclusion: DM is a strong predictor of increased mortality after TAVR influencing both – short- and long-term outcome. Therefore, the prognostic impact of DM on real-world outcome after TAVR should be analysed in future studies aside from currently existing risk models.

P4582
Tricuspid valve regurgitation in patients with constrictive pericarditis

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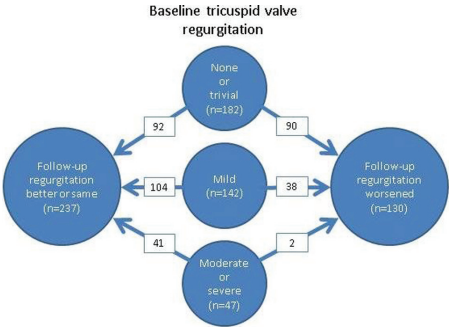
Introduction: Tricuspid valve regurgitation is a common finding in patients with constrictive pericarditis. It is unclear the significance tricuspid valve regurgitation has on outcome.
Purpose: We sought to study whether tricuspid valve regurgitation was associated with increased mortality after pericardiectomy.
Methods: We retrospectively reviewed the records of 450 patients who underwent pericardiectomy for constrictive pericarditis between February 2000 and December 2016. There were no cases of radiation induced constriction or concomitant tricuspid valve intervention. Three study groups were built based on baseline transthoracic echocardiography grade of tricuspid valve regurgitation: none/trivial in 231 patients (51%), mild in 172 (38%), and moderate/severe in 47 (10%) Cochran Armitage Trend test and Cox-proportional hazards regression models were used to assess for an association between study group and mortality.
Results: The patient median age was 61 years (interquartile range 51–69), sex was male in 347 (77%), and ejection fraction was 60% (interquartile range 54–65). Operation included median sternotomy in 390 patients (87%), cardiopulmonary bypass in 282 (63%), and concomitant non-tricuspid valve cardiac operation in 73 (16%). Operative mortality occurred in 23 patients (5%) which included 6 (3%) in the none/trivial study group, 11 (6%) in the mild group, and 6 (13%) in the moderate/severe group (P=0.010). Follow-up transthoracic echocardiography was available in 367 patients (82%) at a median of 7 days (interquartile range 5–21) postoperative. Tricuspid valve regurgitation grade worsened after pericardiectomy in 130 patients (35%) which included 90 patients in the none/trivial study group (49%), 28 in the mild group (27%), and 2 in the moderate/severe group (5%; P<0.001; Figure). Vital status was obtained in all patients at a median of 8.5 years (interquartile range 5.2–11.9) during which 169 patients died (38%). Multivariable analysis of baseline characteristics demonstrated increased risk of mortality in the mild study group (versus none/trivial; odds ratio 1.67; 95% Confidence Interval 1.13–2.47; P=0.010) and in the moderate/severe group (versus none/trivial; OR 2.24; 95% CI 1.34–3.72; P=0.003).



Change in tricuspid valve regurgitation

Conclusions: Tricuspid valve regurgitation is common in patients operated with pericardiectomy for constrictive pericarditis. About one-third of patients experience an increase in regurgitation following operation. Patients with grade mild or worse regurgitation are at increased risk of operative and long-term mortality. Additional study is warranted to determine if tricuspid valve intervention improves outcome.

P4583
Is it safe to spare anticoagulation following mitral valve repair?

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Objective: To evaluate early and late morbidity as well as mortality among patients who received postoperative anticoagulation against those who did not receive anticoagulation after mitral valve repair.
Methods: Retrospective comparative case-control study between February 2000–2017 in a single center. All patients undergoing mitral valve repair for severe mitral regurgitation due to degenerative disorder, Barlow's disease, or annular dilatation were included (n=379). The group of cases consisted of those patients who received elective mitral valve repair and anticoagulation after surgery (Anticoagulation-Group n=104). Patients who received anticoagulation before surgery and those of ischemic origin were excluded. Controls were patients who, by decision of the treating physiscians, did not receive anticoagulation after surgery (Non-Anticoagulation Group n=207). The primary endpoint was 30-day mortality, mortality at follow-up, need for re-intervention at follow-up, and freedom from stroke or events related to anticoagulation at follow-up. We performed a risk-adjusted analysis (propensity score) achieving a comparable population (n=196). The level of statistical significance was established as p<0.05.
Results: Mortality (<30 days) was 1.3%, not different between both groups (p=0.154). The follow-up was completed in 90.1% with a median of 6.2 years (pc25–75: 2.4–9.1 years). There was no significant difference in survival at 9 years of follow-up (Anticoagulation-Group vs Non-Anticoagulation Group: 97.4% ± 1.8% vs 90.0% ± 2.8%, p log rank = 0.170). Neither there was a significant difference in the need for re-intervention (93.2% ± 3.0% vs 97.7% ± 1.3%, p log rank = 0.053), nor in freedom from stroke at follow-up (98.8% ± 1.2% vs 100%, p log rank = 0.665). However, there was a significant difference favouring the Non-Anticoagulation Group in freedom from the combined outcome of stroke and/or events related to anticoagulation (81.2±10.3% vs 98.8% ± 1.2%, p log rank = 0.001). In the risk adjusted analysis similar results were observed for long term survival (p=0.074), for the need for re intervention (p=0.131), and for freedom from stroke at follow-up (p=1.0) while the benefit of the Non-Anticoagulation Group (p log rank = 0.008) was maintained regarding events related to anticoagulation.
Conclusion: Sparing anticoagulation (and its related adverse events) after mitral valve repair surgery is safe, given that it was not associated with a higher rate of stroke, nor with higher mortality, nor was it associated with a greater need for reoperation at 9 years of follow-up.

P4584
Clinical outcomes of transcatheter aortic valve replacement in patients with pure aortic valve regurgitation comparison aortic stenosis

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Limited data exist about safety and efficacy of transcatheter aortic valve replacement (TAVR) in patients with pure native aortic regurgitation (AR).
The aim this study was to evaluate the clinical outcomes of patients with pure native aortic valve regurgitation undergoing with Transcatheter Aortic Valve Replacement and comparing them with patients with aortic stenosis.
Methods: Between April 2008 and December 2017, 20 consecutive patients with severe pure aortic regurgitation (AR) underwent TAVR with the self-expandable aortic valve prosthesis (CoreValve) and 596 patients with severe aortic stenosis (AS).
Results: The mean age and logistic EuroSCORE were (AR vs. AS) 73.8±16 vs. 79.6±6.2 years, p=0.001 and 16.9±9% vs. 17.4±12, p=0.878 respectively.
There were significant differences in measurement of annulus and ascending aortic size (23.7±2 vs. 22±1.8 mm, p<0.001 and 35±6 vs. 31.1±4 mm, p=0.001, respectively). Implantation of prosthesis was performed successfully in 95% patients with AR. The degree of aortic regurgitation after procedure in patients with compared with AS were: none (40% vs. 41.5%) mild (35% vs. 33.6%) moderate (15% vs. 23.4%) and severe (10% vs. 1.5%), p=0.430
The NYHA functional class improved from 3.2±0.61 (baseline) to 1.37±0.51 (one month) and remained stable at follow-up (1.4±0.54). The mortality at 30 days was 10% in patients with AR compared to 3.4% in patients with AS, p=0.157 and there was non-significant differences with late mortality (27.8% vs. 35.4%, p=0.348) after a mean follow-up of 41.4±27 months.
The patients with AR had similar complications after procedure than patients with AS:
Occurrence new-onset left bundle branch block 27.8% vs. 44.3%, p=0.05, stroke 5% vs. 3.9% p=0.533, vascular complications 0% vs. 3.2% p=0.468, acute myocardial infarction 5% vs. 1.7% p=0.306, respectively.
Conclusions: Patients with pure native aortic regurgitation and at high surgical risk might benefit from transcatheter-based therapy. The long-term outcome is favourable compared with patients with aortic stenosis underwent with TAVR

P4585
Percutaneous transluminal alcohol septal ablation in patients with hypertrophic obstructive cardiomyopathy and drug refractory symptoms: intermediate-term outcomes of a prospective cohort

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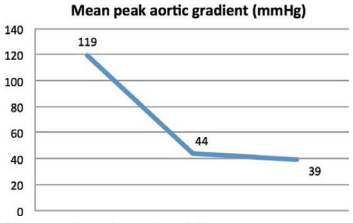
Background: Percutaneous transluminal alcohol septal ablation (ASA) has been widely accepted as a therapeutic option for patients with hypertrophic obstructive cardiomyopathy (HCM) and drug refractory symptoms.

Purpose: The aim of this prospective, single center study was the analysis of midterm outcomes and complications of this technique in our center.
Methods: We enrolled 21 consecutive patients with symptomatic drug-refractory obstructive HCM treated with ASA procedure from 2009 to 2018. Serial clinical and echocardiographic evaluation were performed in all patients.
Results: 81% were female, mean age was 69,1±10,7 years. 71% of patients were on beta blockers treatment, 38% on calcium channel blockers and 14% had a pacemaker. In spite of this, 81% were on III NYHA class and 9% on II NYHA class. Mitral insufficiency ^{3} grade 2 was present in 57% of them before the procedure. Mean maximum baseline gradient was 119,3±39,2 mmHg and mean E/E' 19,2±7,1.
Maximal postprocedural CK serum activity and Troponin I was 1138±600 and 38,9±32,1 respectively. Severe procedural complications rate including death, tamponade and sustained ventricular arrhythmias was 0%, whereas transient high-grade atrioventricular block was shown in 52% and permanent pacemaker was implanted in 24%.
ASA resulted in an statistically significant improvement in left ventricular outflow tract gradient (CI 95% 74,1–115,9, p<0,05) at the end of the procedure and maintained after 3 (CI 95% 57,5–99,7, p<0,05) and 6 months follow-up (CI 95% 47,1–123,7, p<0,05).



Mean peak aortic gradient follow-up.

Conclusion: ASA results in acute and intermediate-term favorable echocardiographic outcomes with low rate of procedural complications in patients with drug-refractory obstructive HCM.

P4586
Invasive cardiological therapies are feasible abd effective in iatrogenic pulmonary vein stenosis in patients after pulmonary vein isolation

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Introduction: Atrial fibrillation (AF) ablation has become the standard treatment of paroxysmal AF in the recent decades. Pulmonary vein (PV) stenosis (PVS) is a rare, but not negligeable complication of the procedure. The management of the disease can be very challenging, it can be treated surgically or with percutaneous angioplasty (PTA) and stent implantation. Safety and efficacy of PV PTA and/or stenting was evaluated in the present study.
Methods: The presence of significant PVS was verified with CT angiography in symptomatic post ablation patients with effort dyspnoe, frequent coughing. In all PVS patients PV PTA was performed. After transseptal puncture selective PV angiography, pressure measurements and then balloon dilatation and/or stent implantation was performed.
Results: Out of 4326 AF ablations since 2005 altogether 13 patients were symptomatic (0.31%). Balloon angioplasty alone as first procedure was performed in 11 out of the 26 stenotized veins, in 5 patient drug eluting balloon was used, two veins were stented with BMS afterward. Furthermore, in 11 veins BMS stents Biotronik Astron 10x40x135 and in 3 patients self expanding DES stents Cook Medical Zilver 8x40x135 mm were used (4 veins). Total PV occlusion was found in 3 cases, which could also be successfully treated with PTA. In one patient rupture of the PV was noticed after the balloon dilatation of the PV, surgical patch plasty of the PV was needed. During PTA of a totally occluded PV distal rupture occured after balloon dilatation causing massive haemoptoe, but it could be effectively treated with balloon reinflation. Restenosis could be observed after the first intervention in 4 patients, all of them were treated with reintervention, 3 out of 4 required a third intervention. 7 veins were affected, in 4 pts balloon dilatation, in 2 pts DES implantation and in 1 case BMS implantation was performed. After re-intervention no significant restenosis could be observed. All patients became asymptomatic, and all of them were put on combined antithrombotic and anticoagulant therapy for one month, after it only clopidogrel and warfarin therapy was continued for one year, when clopidogrel was stopped, and warfarin only was continued.
Conclusion: PV PTA seems to be a feasible method in the treatment of iatrogenic PVS, however the risk of specific complications is notable. The occurence of restenosis after balloon dilatation alone or after BMS stent implantation remains high. In the presence of verified PVS self expanding DES implantation seems to be the most effective method of treatment, however even in these patients multiple interventions might be necessary. Multicenter studies would be prefereable for helping the optimal therapy selection.

P4587
Bronchial artery embolization for moderate to massive hemoptysis

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Purpose of study: Hemoptysis is a common emergency coming to the pulmonary medicine and general Medicine department. Massive hemoptysis has high mortality even after surgical treatment. Bronchial artery embolization is an effective alternative to surgery for controlling hemoptysis, with high success rate.
Material and methods: 74 consecutive patients coming to our hospital with moderate to severe hemoptysis were subjected to bronchial artery embolization (BAE). Femoral arterial puncture was the commonest approach. Some patients, where the culprit vessel was arising from subclavian artery, were approached from radial artery puncture. All patients were embolized with poly vinyl alcohol particles.
Results: Out of 74 patients, 54 were male and 20 were female. The mean age was 46.67±14.58 yrs. Cause of hemoptysis was tuberculosis in 64 patients, bronchiectasis in two, aspergillosis in two and in six, the cause was not known. Total 192 vessels were embolized, 86 bronchial, 43 from subclavian, 53 intercostal and 20 internal mammary.
Within one year, recurrence occurred in 13 patients three of whom died. In 9 patients, the bleeding was controlled with repeat BAE.
Conclusion: Commonest cause of hemoptysis was pulmonary tuberculosis. BAE had initial success of 100%. Recurrence occurred in 13 (17.56%) patients. Repeat BAE was successful in majority of these. 3 patients died of recurrent hemoptysis.

P4588
Echo guided septal radiofrequency ablation for treatment of obstructive hypertrophic cardiomiopathy - Case series

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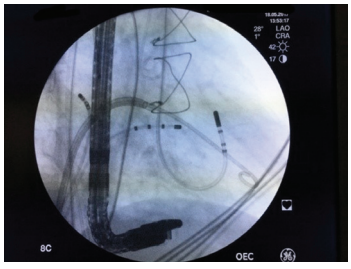
Hipertrophic cardiomiopathy affects one in every 500 person. Two thirds of those present LV outflow tract gradient, often symptomatic and requiring medical treatment. Patients refractory to medical treatment require myectomy or alcohol septal ablation. Recently a new treatment method using radiofrequency catheter ablation has emerged with promising results. The techniques described earlier with extensive ablation from both sides of interventricular septum caused atrioventricular block in 20% of the patients, most of them received ICD implants or pacemaker. We performed transesophageal echocardiography to guide focused ablation of left ventricular septum in eight patients and a his bundle quadripolar catheter on the right side to avoid damage to His purkinje system. One of those was excluded from the study for presence of atrial fibrillation during the procedure, rendering us unable to measure gradient reduction. All seven patients underwent cardiac MRI, Echocardiogram, 6 min walk test and Minnesota QOL score before procedure and were scheduled to repeat after 2 month, 6month and one year of ablation.
Results: The median age was 55,2 years. Medium Gradient was 102,5mmHg. One patient (patient 1) already underwent previous myectomy, one had a failed Alcohol septal ablation (patient #7), while the other five were procedure naive. The ablation was performed during general anaesthesia, and lesions using 8 mm catheter, 80W, 60 0C, 120 second lesions. 10 to 30 lesions were performed, and the desired procedural endpoint was reduction of at least 25% of initial LV maximum gradient. The reduction of the gradient happened in patients 1, 3, 4, 5, 6 and 7. Patient #2 presented a brief reduction during procedure with recurrence during the first 20 minutes. All seven patients presented gradient increase during the first 24 hour in ICU (per protocol) with progressive decrease during the first week, probability related to edema. Five patients have already completed the two month follow up. Among these five all that presented intraprocedural reduction of gradient also presented improvement of symptoms by the end of the second month (average reduction on the follow up of the five from 117,8mmhg to 53,4mmHg, a 55% reduction in maximum gradient). All four patients with gradient reduction at the end of two month had QOl scores increased and NYHA class reduced at least one point. There were no clinical complications, there was no increase in QRS duration or HV interval.



Conclusion: Echocardiography guided catheter radiofrequency ablation of septum is feasible and accomplished clinical improvement and sustained gradient reduction through the end of 2 month post ablation.