BEST POSTERS IN NON CORONARY CARDIAC INTERVENTION

P1488

Treatment of severe tricuspid regurgitation in patients with advanced heart failure with caval vein implantation of the edwards sapien XT valve (TRICAVAL): a controlled prospective randomized trial

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Purpose: Tricuspid regurgitation (TR) is a frequent comorbidity in patients with advanced heart failure and associated with high morbidity and mortality. As surgical repair carries a high risk for postoperative complications in these patients, innovative interventional therapies of TR are an unmet clinical need. The aim of this study was to evaluate the impact of caval valve implantation (CVI) on exercise capacity compared to optimal medical therapy (OMT).
Methods: 28 patients with severe symptomatic TR (mean age 75.6±8.4 years) were selected based on clinical and anatomic suitability criteria and randomized to OMT (n=14) or implantation of a balloon-expandable Edwards Sapien XT into the inferior vena cava (n=14). Primary endpoint was maximal oxygen uptake after three months. Secondary endpoints included six minute walk test, NYHA class, NTproBNP levels, right heart function, unscheduled hospitalization for heart failure progression, and quality of life as assessed by the Minnesota Living with Heart Failure Questionnaire (MLHFQ). Safety was evaluated according to the VARC-2 criteria.
Results: The change from baseline of maximal oxygen uptake did not differ significantly between the OMT and CVI groups (-0.1±1.7 ml/kg/min vs. -1.0±1.4 ml/kg/min, p=0.352). CVI patients showed significant improvement of NYHA class (-0.6±0.5, p=0.025) and quality of life (MLHFQ -19.9±12.2, p=0.004). Compared to the control group, however, there were no significant differences regarding the changes from baseline of NYHA class, six minute walk test, NTproBNP, right heart function, hospitalizations, and quality of life between both groups. Four periprocedural complications (one tamponade, three valve dislocations) occurred in the CVI group resulting in conversion to surgery.
Conclusion: Implantation of a ballon-expandable transcatheter valve into the inferior vena cava did not result in a superior functional outcome compared to OMT and was associated with a high rate of periprocedural complications. Further studies with dedicated devices may be needed to identify patient subgroups who may benefit from the procedure.
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P1489

Sustained long term benefits after alcohol septal ablation in patients with obstructive hypertrophic cardiomyopathy: a single centre experience

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Background and purpose: Hypertrophic cardiomyopathy (HCM) is an autosomal dominant myocardial disease, characterized by left ventricular hypertrophy and obstruction of the left ventricular outflow tract (LVOT). In symptomatic patients refractory to drug therapy, surgical septal myectomy is traditionally performed as treatment. However, percutaneous alcohol septal ablation (ASA) now exists as a less invasive alternative.
We evaluated the long-term outcomes, regarding safety and efficacy, of ASA. We report our retrospective analysis based on a single center experience, with 8 years follow up.
Methods: From January 2005 to July 2017, 37 patients with obstructive HCM underwent ASA. All patient data, including procedural and outcome characteristics, were prospectively recorded in a dedicated database. Comparison of continuous values, pre- and post-ASA, were performed using paired sample t-test.
Results: There were no procedural related deaths. 5 patients subsequently required septal myectomy and 1 patient received a second ASA. 2 patients died during follow up. One due to cancer and the other to ischemic heart disease. The remaining 30 patients (mean age of 66±10.6, 20 males, 10 females) formed the basis of this study. 5 out of 30 patients (17%) required a permanent pacemaker due to post-ASA complete heart block. 2 patients (7%) developed ventricular fibrillation and required an implantable cardioverter-defibrillator.
Serial echocardiograms were performed before the procedure, and subsequently at 3 months, as well as 1, 3, 5, and 8 years after ASA. New York Heart Association classification decreased from 2.1±0.4 before ASA, to 1.5±0.5 ($p<0.0003$) at 1 year follow up. Mean septal thickness was reduced from 1.6±0.3 cm prior to ASA, to 1.3±0.3 cm ($p<0.0003$) at 1 year follow up. LVOT gradient measurements are presented in Table 1. Analysis show a significant reduction in gradients at most follow up time points, in comparison to pre-ASA values.
Conclusion: ASA appears to be an effective treatment for patients with obstructive HCM, leading to sustained long-term reductions in LVOT gradient and clinical benefits.

Table 1. LVOT gradients in patients before and after ASA

	LVOT peak resting gradient (mmHg)	LVOT mean resting gradient (mmHg)	LVOT peak Valsalva gradient (mmHg)	LVOT mean Valsalva gradient (mmHg)
Pre-ASA	53±41	27±22	83±25	39±14
3 months follow up	31±30 ($p<0.02$)	14±13 ($p<0.01$)	52±37 ($p<0.003$)	25±19 ($p<0.02$)
1 year follow up	13±5 ($p<0.0006$)	7±3 ($p<0.002$)	36±24 ($p<0.000006$)	17±13 ($p<0.0003$)
3 years follow up	12±6 ($p<0.005$)	6±4 ($p<0.006$)	42±35 ($p<0.02$)	18±16 ($p<0.02$)
5 years follow up	10±10 ($p<0.03$)	5±6 ($p<0.06$)	27±23 ($p<0.0009$)	13±11 ($p<0.03$)
8 years follow up	4±7 ($p<0.04$)	2±3 ($p<0.03$)	15±22 ($p<0.03$)	6±8 ($p<0.01$)

P1490

Renal denervation as antiarrhythmic strategy in recurrent ventricular arrhythmias in patients with implanted cardioverter-defibrillators

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Renal denervation as antiarrhythmic strategy in recurrent ventricular arrhythmias in patients with implanted cardioverter-defibrillators
Introduction: The aim of our research to analyze the influence of renal denervation (RDN) on ventricular arrhythmias (VA) and number of appropriate ICD shocks in patients with implanted ICD with arterial hypertension (AH).
Methods: Four patients with repeated appropriate shocks due to recurrent ventricular tachycardia (VT) and AH were included in our research. All patients had different main pathology: 1 patient had a long QT syndrome, 1 - ischemic cardiomyopathy, 1 - idiopathic right ventricular outflow tract tachycardia and 1 - arrhythmogenic dysplasia of the right ventricle. Also all patients had AH as a contributing factor. The average age of patients was – 55,5 [43; 62]. Number of appropriate ICD shocks within 9–12 month prior RDN was 9±4,9. These patients had symptomatic recurrent sustained VT with median of 19 [10; 37] occurred despite on antiarrhythmic drugs and prior cardiac ablation. One year prior, most of patients experienced episodes of presyncope, syncope and palpitations. All patients underwent by RDN. Procedure was performed by an experienced electrophysiologist at the renal arteries using specialized electrode Symplicity.
Results: 12 months after RDN, VT/VF episodes were reduced to 2,5 [1,5; 15,5] (p=0.03). Baseline office blood pressure (BP) was 148±9,1/93,8±4,8mmHg. Two of 4 patients (50%) were free from ventricular arrhythmias at 1 year follow-up. Number of appropriate ICD shocks dramatically decreased from 9±4,9 before RDN till 0 after RDN (p=0,04). Office BP decreased by – 19,3/11,3 mmHg (p=0,02) at 1 year follow-up. All patients had no episodes of presyncope, syncope and palpitations.
Conclusions: Despite various etiology of VT in this group of patients RDN successfully demonstrated decrease of the general burden of VA and the number of appropriate ICD shocks. Suppression of the sympathetic tone under the influence of RDN plays a significant role in treatment of patients with recurrent sustained VT and ICD.

P1491

Comparison of the safety and efficacy of balloon expandable Vs. self expandable aortic valve prosthesis in women undergoing transcatheter aortic valve replacement

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Background: Decisions on valve selection in women undergoing transcatheter aortic valve replacement (TAVR) may be based on clinical and anatomical characteristics as well as logistical factors
Methods: WIN TAVI is an international prospective registry comprising data on 1019 women who underwent TAVR with any locally approved device between March 2013 and December 2015. The primary safety endpoint at 30 days according to the Valve Academic Research Consortium 2 (VARC 2) definition was a composite of all-cause mortality, all stroke, life-threatening bleeding, stage 2 or 3 acute kidney injury, coronary artery obstruction requiring intervention, major vascular complications, repeat procedure for valve-related dysfunction. For the purpose of this analysis, only patients treated with Edwards balloon expandable valves or Medtronic self-expandable valves were considered. Outcomes were ad-