tients (n=76 per group) undergoing TAVI, baseline clinical characteristics were similar between control and test groups, except for a higher median Euroscore II (2.8 vs. 2.3%, p=0.02) and higher rate of TAVI for failing surgical bioprosthesis (11.8% vs. 2.6%, p=0.03) in the control group. The DAP was reduced in the test group: mean reduction of -27.5 Gy*cm^2 (95% confidence intervals [CI]: 15.9–39.1, p<0.001). Furthermore, ED (mean reduction: -6.5 [95% CI: 5.9–7.2] mSv, p<0.001) and AK (mean reduction: -167.5 [95% CI: 163.4–177.3] mGy, p<0.001) were lower in the test group. Fluoroscopy time, contrast volume, and clinical outcomes were similar.
Conclusions: Patient radiation exposure was significantly reduced using a novel live advanced fluoroscopy image processing with calcification enhancement and fusion of the virtual aortic annulus without compromising patient safety.

P3599
Novel, preclinical model of aortic banding for evaluation of implantation feasibility and long term durability of transcatheter aortic valves

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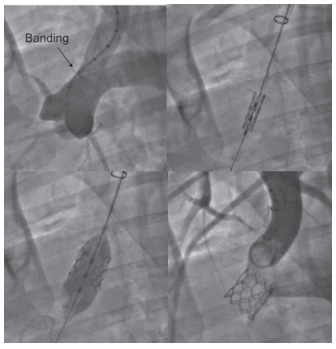
Background: Currently available animal models of transcatheter aortic valve implantation (TAVI) are limited to evaluation of device acute performance due to lack of underlying calcific aortic valve disease and anchoring mechanism. Therefore, early dislocation of the device is very common and disables assessment of long term performance, durability and biological response. Herein we present novel model aortic banding followed by TAVI implantation.
Methods and results: Surgical ascending aortic banding was performed in 33 domestic sheep via minimal lateral thoracotomy. The stenosis with surgical tape of ascending aorta between sino-tubular junction and brachiocephalic trunk was performed. Three animals died during periprocedural period. Two weeks later 15 TAVI procedures via surgical cutdown of the carotid artery were performed utilizing 22 or 24 French delivery systems. In total, 15 TAVI valves into sites with banding obstruction were implanted, including 11 biological (MyVal, Merill Lifesciences, Vapi, India) 10 polymer and 12 biological leaflet valves (Inflow, The CardValve Consortium, Poland). Device anchoring was successful in all animals and acute valve functionality was achieved in all cases. Five animals died within 7 days period, all of them with underexpansion caused by 20–30% banding obstruction (15–16 mm) which led to significant gradient through prosthesis and left ventricle overload. Remaining animals with 18–20 mm obstruction and proper valve expansion survived. At the time of submission 28 day follow up in all of which good valve functionality in transthoracic echocardiography was confirmed. Ninety day follow-up is pending. Fast learning curve was observed in new groups of animals. The terminal follow up is planned up to 6 months after which echocardiography and pathological evaluation will be performed.



TAVI in banding site overview

Conclusions: The ovine TAVI aortic banding model is the first which showed fully predictable TAVI valve anchoring, low mortality and ability to perform long term observation. Implantation was successful in all cases and the early mortality was observed in the first half of the studied group with tight banding. After adjustment there was no animal mortality in consecutive 6 animals.

P3600
Safety and feasibility of balloon aortic valvuloplasty in patients with severe aortic stenosis: role of non TAVI centers. The BAV for LIFE experience of CAMPANIA SICI GISE COMMUNITY

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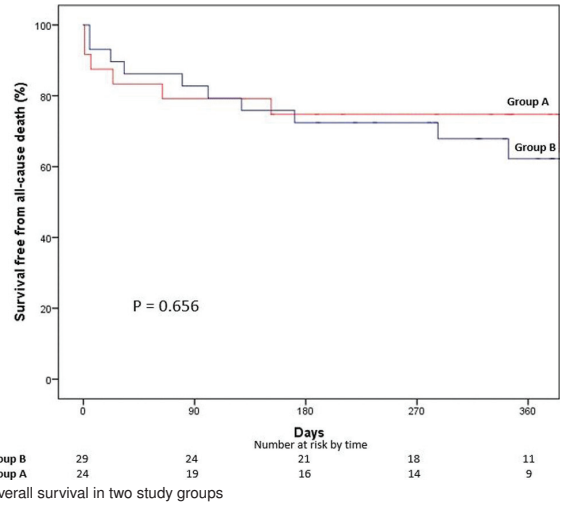
Background: Many high-risk patients with symptomatic severe aortic stenosis are neither eligible for surgical nor for transcath-eter (TAVI) aortic valve replacement. Although percutaneous balloon aortic valvuloplasty (BAV) is a viable option in these patients, it had been almost abandoned in the majority of centers not performing TAVI.
Purpose: To evaluate the safety and the feasibility of BAV in patients at high-risk for SAVR or TAVI in centers not performing TAVI after a 10-sessions, six months practical training in TAVI centers as compared to high-volume TAVI center.
Methods: Between June 2016 to June 2017, we consecutively and prospectively collected clinical, echocardiographic and procedural data of all patients undergoing BAV in five participating non-TAVI centers (GROUP A) and in one high-volume TAVI center (GROUP B). All patients underwent clinical follow up in order to evaluate the occurrence of all-cause death and rehospitalization for heart failure (HF).
Results: A total of 55 patients (mean age 83.9±7.0, 41.8% males) were enrolled: 25 in the GROUP A, 30 in the GROUP B. The overall population showed a high burden of comorbidities with high prevalence of hypertension (85.4%), diabetes (32.7%), chronic obstructive pulmonary disease (36.4%), coronary artery disease (52.7%), prior myocardial infarction (25.4%) and peripheral arteriopathy (23.6%), with no differences between groups. Only chronic kidney disease at baseline was more prevalent in GROUP B (90% vs 60%, p=0.009). The surgical risk evaluated by Logistic EuroSCORE and STS score was almost similar between groups, while EuroSCORE II was significantly higher in GROUP B [6.1 (4.8–9.3) vs 10.8 (6.7–20.0), p=0.011]. All procedure were performed by using transfemoral approach determining an increase in indexed aortic valve area from 42.8±10.1 to 53.8±18.1 mm^2, and a reduction of mean and peak transvalvular aortic gradient from 46.5±15.5 to 28.5±12.4 and from 81.1±28.3 to 52.5±20.2 mmHg respectively, without differences between groups. The mean follow-up time was 293±189 days; two patients were lost. All-cause death occurred in 7 (29.2%) patients of the GROUPS A and in 11 (37.9%) patients of the GROUP B (p=0.502); the rehospitalization for HF occurred in 6 (25.0%) and in 9 (31.0%, p=0.627). The Kaplan-Meier analysis of overall survival showed a substantial overlap of the curves with 6 and 12-months survival estimates of 74.8% vs 72.4% and of 74.8% vs 62.2% in GROUPS A and B respectively (p=0.656) (Figure); the survival free from rehospitalization probability at 6 months and 1 year was 78.1% vs 75.4% and 71.6% vs 59.9% (p=0.665).



Overall survival in two study groups

Conclusions: BAV is a life-saving procedure in patients at prohibitive risk for TAVI or SAVR and should be performed in all catheterization laboratories with an adequate skillness. In our study, although limited by the small population size, BAV shows a good feasibility and safety profile in centers not performing TAVI after a relatively short training period.

P3601
Pre-existent vs. new-onset atrial fibrillation after transcatheter aortic valve implantation: predictors and outcomes

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Introduction: Atrial fibrillation (AF) is the most common sustained arrhythmia in patients submitted to Transcatheter Aortic Valve Implantation (TAVI), as it is in