TCT-885
Transcatheter Aortic Valve Implantation with Medtronic CoreValve® Versus Medtronic CoreValve® with Accutrak Delivery System
Gill Buchanan1, Alaide Chejfo1, Matteo Montorpolo1, Francesco Maisano1, Azeem Latib1, Micaela Cioni1, Filippo Fijn1, Francesco Giannini1, Chiara Bernelli1, Alessandro Durante1, Santo Ferrarello1, Mauro Carlin1, Pietro Spagnoli1, Annalisa Franz1, Chiara Gerli1, Remo Covelli1, Ettore La Agricola1, Giovanni La Cann1, Ottavio Alfieri1, Antonio Colombo1, 2San Raffaele Scientific Institute, Milan, Italy, 3San Raffaele Scientific Institute, Milan, N/A

Background: The Medtronic CoreValve® with Accutrak delivery system (MCVAT) (Medtronic Inc., Minneapolis, MN) was introduced to aid deliverability. The aim was to compare short-term outcomes after transcatheter aortic valve implantation (TAVI) with both the original Medtronic CoreValve® delivery system (MCV) vs. the MCVAT.

Methods: All consecutive patients with native valve aortic stenosis undergoing transfemoral TAVI in our center from November 2007-May 2012 with either MCV or MCVAT were included. The 31 mm MCVAT became available in September 2011. Study objectives were the Valve Academic Research Consortium (VARC) outcomes.

Results: In total, 125 TAVI cases were included: 56% (n=70) MCV and 44% (n=55) MCVAT. There was a trend for patients treated with MCV to be older (79.7±6.7 vs. 77.5±6.9 years; p=0.072), but no other differences in baseline characteristics. Logistic EuroSCORE was respectively 24.6±16.5% in MCV vs. 24.0±15.6% in MCVAT (p=0.569) and STS score 9.3±9.6% vs. 8.7±8.2% (p=0.713). At 30 days, there were no differences between MCV and MCVAT respectively in all-cause (7.1% vs. 5.6%; p=0.721) or cardiovascular mortality (2.9% vs. 5.6%; p=0.449). In addition, myocardial infarction (2.9% vs. 0%; p=0.206) and stroke (0 vs. 1.8%; p=0.257) were similar. However, there were improvements in major vascular complications (17.1% vs. 3.6%; p=0.017), life-threatening bleeding (32.9% vs. 16.4%; p=0.036) and acute kidney injury (44.3% vs. 20.4%; p=0.005), leading to an improved combined safety endpoint (40.0% vs. 22.6%; p=0.042). Interestingly, there was an increase in arrhythmia (18.6% vs. 49.1%; p=0.001) and permanent pacemaker implantation (21.4% vs. 41.8%; p=0.014) in the MCVAT group. There were no differences in the event of embolization (7.1% vs. 12.7%; p=0.293) or moderate-severe aortic regurgitation (5.7% vs. 5.7%; p=0.990). Furthermore, there was no difference in device success (90.0% vs. 85.5%; p=0.438).

Conclusions: The MCVAT has improved safety endpoints compared to MCV, probably due to the learning curve. However, there is a higher rate of arrhythmia and PPM in this group, possibly due to the introduction of the 31 mm valve. Longer term follow-up and larger patient numbers are required.

TCT-886
Predictors of Vascular complications in patients undergoing Balloon Aortic Valvuloplasty
Annappaor Kini1, Rosana Mehran2, Nilasha Gakwashas2, Ziad Serge2, Mauricio Cohen3, Jennifer Yu4, Usman Baber4, Samantha Sartons4, Robert Py4, Klaenthis Theodoropoulous1, Roja Thapi1, Elliot Elias4, Socrates Kakoulides4
1Cardiovascular Institute, Mount Sinai Medical Center, New York, USA, 2New York University, New York, New York City, NY, 3Mount Sinai Hospital, New York, USA, 4Mount Sinai Medical Center, New York, NY

Background: Balloon aortic valvuloplasty (BAV) is a palliative treatment for severe aortic stenosis (AS) that is increasingly performed as a bridge to transcatheter aortic valve replacement. We investigated the independent predictors of vascular complications in AS patients who underwent BAV.

Methods: We performed a retrospective review of consecutive patients who undergoing non-emergent, retrograde BAV at two high-volume US centers. We analyzed baseline and procedural characteristics as well as in-hospital outcomes according to the presence or absence of vascular complications, as classified by the Vascular Academic Research Consortium (VARC). Net adverse clinical events (NACE) were defined as composite of absence of vascular complications, as classified by the Vascular Academic Research Consortium (VARC). Net adverse clinical events (NACE) were defined as composite of vascular complications. Patients with vs. without vascular complications had higher rates of myocardial infarction (13.3% vs. 2.5%; p=0.001), stroke (6.7% vs. 0.3%; p<0.001), and NACE (33.3% vs. 9.8%; p<0.001). Multivariable adjusted predictors of vascular complications are shown in the Table.

Conclusions: In this large registry of BAV patients, pre-closure failure, thrombocytopenia and concurrent PCI were associated with increased risk of complications in patients undergoing BAV.
TCT-888

Patients With Aortic Stenosis Referred For Transcatheter Aortic Valve Implantation: Treatment Decision, In-hospital Outcome And Determinants Of Survival

Rutger-Jan Nuij1, Antonio Dager2, Robert M A Van Der Boom2, Marisol Jaimex3, Bernardo Caicedo3, Jaime Fonseca3, Nicolas van Mieghem3, Luis Benitez3, Juan Pablo Umana4, William O’Neill8, Eduardo de Marchena2, Peter De Jaegere3

1Erasmus MC, Rotterdam, Zuid Holland, 2Angiografía de Occidente, SA, Cali, Colombia, 3Thoraxcenter, Erasmus Medical Center, Rotterdam, Rotterdam, Netherlands, 4Fundacion Clinica Cardio Infantil, Bogota, 5Angiografía de Occidente, Cali, 6Erasmus MC, Rotterdam, Netherlands, 7Angiografía de Occidente S.A, Cali, Cali, 8Leonard M. Miller School of Medicine, Miami, USA, 9Miller School of Medicine, Miami, FL

Background: To assess treatment decision and outcome in patients referred for Transcatheter Aortic Valve Implantation (TAVI) in addition to predictive factors of mortality after TAVI.

Methods: Three-centre prospective observational study including 358 patients. End-points were defined according to the Valve Academic Research Consortium.

Results: Of the 358 patients referred for TAVI, TAVI was performed in 235 patients (66%), surgical aortic valve replacement (AVR) in 24 (7%) and Medical Therapy (MT) in 99 (28%). Reasons to decline TAVI in favor of AVR/MT were patient’s preference (65%), surgical aortic valve replacement (AVR) in 24 (7%) and Medical Therapy (MT) in 99 (28%). Reasons to decline TAVI in favor of AVR/MT were patient’s preference (65%), surgical aortic valve replacement (AVR) in 24 (7%) and Medical Therapy (MT) in 99 (28%). Among the 358 patients, 235 underwent TAVI and 123 were classified as non-operable.

Conclusions: Approximately two-thirds of the patients referred for TAVI receive this treatment with gratifying short- and long-term survival. Another 7% underwent AVR. Prognosis is poor in patients who do not receive valve replacement therapy.

TCT-889

Sex-related clinical characteristics and outcome before and after transcatheter aortic valve implantation

Manolis Vavuranakis1, Maria Karioi1, Vassilis Voudris2, Carmen Moldovan1, Sofia Thomopoulou2, Konstantinos Achatzis1, Konstantinos Kalogerias1, Dimitrios Vrachatis1, Evangelia Graviad1, Christodoulos Stefanidis3

11st Department of Cardiology, Hipppokration Hospital, National and Kapodistrian University of Athens, Athens, Greece, 22nd Department of Cardiology, Onassis Cardiac Surgery Centre, Athens, Greece

Background: Aortic stenosis is the most common valvulopathy in industrialized countries which is treated with transcatheter aortic valve implantation (TAVI) when patients are inoperable or high risk. Nevertheless, female sex constitutes an unfavorable predictive factor for the outcome of transcatheter interventions for heart diseases. In this study we will evaluate baseline clinical characteristics, echocardiographic parameters as well as electrocardiographic changes before and after TAVI.

Methods: Consecutive patients who underwent TAVI years were evaluated from an existed database. Baseline characteristics were collected before TAVI while echocardiograms and ECGs were recorded before TAVI and daily for 5 days after the procedure. We separated patients in two groups according to gender.

Results: Overall, data from 122 patients (pts) (80.42±5.6 years, AVA: 0.66±0.14 cm2) were analyzed. Out of them, 62 (pts) (52.5%) were female and 58 (pts) (47.5%) were male. When we compared both groups for baseline clinical characteristics, we found that women had smaller annulus (22.02±1.62 vs. 23.98±2.07, p<0.01) and aortic valve area (0.63±0.14 vs. 0.69±0.13, p=0.012) while AVAI did not differ among two sexes (0.37±0.07 vs. 0.36±0.08, p=0.61). Women had better baseline LVEF (52.16±9.37 vs. 47.69±13.01, p=0.03) but higher systolic pressure of pneumonic artery (47.35±13.98 vs. 37.92±10.95, p<0.01) and in higher percentage (45 pts (36.9%) vs. 25 pts (20.5%), p=0.03) comparing to men. Permanent pacemaker implantation was lower to women (0.14 vs. 0.69, p=0.01). Furthermore, women stayed less at coronary care unit (8.07 vs. 10.95, p=0.01) and in higher percentage (45 pts (36.9%) vs. 25 pts (20.5%), p=0.03) comparing to men. Permanent pacemaker implantation was lower to women (0.14 vs. 0.69, p=0.01). Furthermore, women stayed less at coronary care unit (8.07 vs. 10.95, p=0.01). Similarly, in hospital treatment with gratifying short- and long-term survival. Another 7% underwent AVR. Prognosis is poor in patients who do not receive valve replacement therapy.

Conclusions: In conclusion, women demonstrated better baseline clinical characteristics except for PASP and lower need for permanent pacemaker implantation. However, they did not differ from men as far as short term mortality is concerned.

TCT-890

Gender Differences in Patients with Severe Aortic Stenosis Undergoing Transcatheter Aortic Valve Implantation

Stefan Stortecky1, Peter Wenaszewski1, Thomas Pilgrim2, Alexander Kudner2, Lutz Buellesfeld1, Christoph Huber1, Ahmed Khattab1, Stefan Windecker1

1Bern University Hospital, Bern, Switzerland

Background: Transcatheter Aortic Valve Implantation (TAVI) has emerged as novel treatment option in high-risk patients with symptomatic severe aortic stenosis. The purpose of the present study was to determine differences in gender in terms of baseline