Feasibility and safety of early discharge after transfemoral transcatheter valve implantation with balloon-expandable prosthesis: a prospective study

Guillaume Cellier*, Eric Durand, Christophe Tron, Saawane El Hatimi, Alain Cribier, Helene Eltchaninoff
CHU Rouen, Charles Nicolle, Rouen, France
*Corresponding author: cellier_guillaume1986@yahoo.fr (Guillaume Cellier)

Introduction There is currently no consensus on the duration of hospitalization required after transfemoral transcatheter valve implantation (TF-TAVI). We recently reported, retrospectively, that early discharge (within 3 days) was feasible in 31% and safe without any death and a low rate of re-hospitalization at 30 days. We therefore aimed to confirm the feasibility and safety of early discharge after TF-TAVI in a prospective study.

Methods After implementation of an early discharge pathway in our center in January 2014, we included prospectively, between January 2014 and January 2015, 130 consecutive patients scheduled for TF-TAVI with Edwards prostheses using exclusively local anesthesia. The primary end-point combined death and re-hospitalization or discharge to 30-day follow-up, the proportion of early discharge (within 3 days) and the cause of non-early discharge were also assessed.

Results During the study period, the mean length of stay was 4±0.27 days and 76 (58.6%) patients were discharged early within 3 days including 55 (42.3%) patients discharged within 2 days after the procedure. The main causes of non-early discharge were conduction abnormalities in 33 (25%) patients, major vascular complications in 18 (13.8%) patients, social issues in 11 (8.5%) patients, heart failure in 3 (2.3%) patients, and acute kidney injury in 2 (1.5%) patients. Finally, between discharge and 30-day follow-up, there was no death and only 5 (6.5%) patients required re-hospitalization.

Conclusions Early discharge is feasible in slightly over 50% of cases in selected patients scheduled for TF-TAVI using a balloon-expandable and local anesthesia, and is associated with no death and a very low rate of readmission at 30 days. The two main causes of non-early discharge are occurrence of new conduction disturbances and major vascular complications.

The author hereby declares no conflict of interest

A phenotypic study of ARHGAP24 mitral valve prolapse suggests a genetic origin for fibro elastic deficiency

(1) CHU Nantes, Institut du Thorax, Nantes, France – (2) APHP-Hôpital Européen Georges Pompidou (HEGP), Paris, France – (3) MGH, Boston, Etats-Unis – (4) CHU Angers, Angers, France
*Corresponding author: ajjobbe@wan waillot.com (Antoine Jobbe Duval)

Mitral valve prolapse (MVP) by Barlow disease is recognized a genetic disease. Fibro-elastic deficiency (FED)-MVP is considered a pure degenerative condition. FLNA, the first gene involved in MVP, encodes for Filamin-A, a cytoskeleton associated protein. It interacts with a protein named Filgapt, encoded by ARHGAP24 (Chr. 4), in the mechanical transduction. We hypothesized that ARHGAP24 mutations could elicit MVP with same pathway. For this purpose, the authors selected patients scheduled for TF-TAVI using a balloon-expandable and local anesthesia, and is associated with no death and a very low rate of readmission at 30 days. The two main causes of non-early discharge are occurrence of new conduction disturbances and major vascular complications.

The author hereby declares no conflict of interest

Degenerative calcific mitral stenosis in patients referred for high surgical risk aortic stenosis: detection and quantification by multi-detector computed tomography

Erik Bouvier* (1), Simon Mejean (2), Olivier Larezz (2), Patrick Seknadi (2), Dominique Fourchy (2), Jean-Yves Tabute (2), Bertrand Cornélier (2)
(1) Hôpital Jacques Cartier, Massy, France – (2) CHU Toulouse, Ran-gueil, Toulouse, France
*Corresponding author: erik.bouvier@wanadoo.fr (Erik Bouvier)

Background Mitral annular calcifications (MAC) is a common finding in elderly patients referred for transcatheter aortic valve implantation (TAVI), sometimes responsible of significant degenerative calcified mitral stenosis

The junction of MSD and AAC defines a MVP prodromal form (MVP-prod).

There was no difference between the two groups on baseline characteristics. Leaflets were thin in the mutant group (PML: 2.7±1 vs 2.2±0.5mm in control, P=0.21, AML: 2.5±0.9 vs 2.1±0.4mm, P=0.235), as reported in FED-MVP. Only the PML was elongated (8.2±1.6 vs 6.0±1.2mm², P=0.003) in the mutated group, leading to an anterior displacement of the coaptation point (51±11 vs 66±7%, P=0.0003). Abnormal mitral phenotype (70% of MVP, 23% of MVP prod) and mitral regurgitation (93 vs 38%, P=0.0007) were frequent in the mutated group. Two probands were operated for severe MR related to chordal rupture; histological examination confirmed the leaflets thinness.

ARHGAP24 is the first gene for autosomal dominant inherited MVP. Our limited series of patients exhibit typical features of FED-MVP. Our results could change the paradigm of a pure degenerative disease for FED-MVP.

The author hereby declares no conflict of interest
(CaMS), but prevalence of both is poorly defined. Multidetector computed tomography (MDCT) allows fine quantification of calcifications and is a reliable tool in rheumatic mitral stenosis, but its contribution in CaMS remains unknown. Our objective was to estimate prevalence of MAC and CaMS in patients referred for TAVI using MDCT, and determine morphological factors leading from MAC to CaMS.

Methods and results A cohort of 346 consecutive patients referred for TAVI evaluation was screened by MDCT for MAC. One hundred and seventy-four patients were positive for MAC. Among these patients, 165 patients had mitral valve area (MVA) assessable by MDCT planimetry (mean age 84 years). Analysis by segment revealed calcifications on: A1 30.9%, A2 29.1%, A3 42.4%, P1 56.4%, P2 78.8%, P3 69.7%. Mean mitral calcification volume and MVA were 1020±1398mm³ and 30.9%, A2 29.1%, A3 42.4%, P1 56.4%, P2 78.8%, P3 69.7%. Mean of immediate result of PMC are the guaranty for the maintain of good result of this study was to analyze clinical and echocardiographic outcomes in a series of patients who received surgical treatment for severe tricuspid regurgitation and to compare outcomes according to the operative approach to valve repair or replacement.

Methods Retrospective study in 239 consecutive patients with severe tricuspid regurgitation undergoing valve surgery between April 2006 and February 2014 in military hospitals of Algeria and Constantine.

Results A total of 112 ringless and 85 ring annuloplasties were performed and 9 bioprostheses and 33 mechanical prostheses were implanted. Perioperative mortality was 18.5% and was associated with age and cardiopulmonary bypass time. During clinical follow-up (median, 41 [interquartile range, 24-89] months), 2 reop-
erations were required in the ring annuloplasty and mechanical prosthesis groups; prosthetic thrombosis was diagnosed in 4 patients in the latter group. Total mortality after follow-up was 29.9% and was associated with age>70 years and extra-corporal circulation time. The emergence of new severe tricuspid regurgitation was associated with age and ringless annuloplasty (P=0.04).

Conclusions Ringless repair was significantly associated with recurrence of severe tricuspid regurgitation. The use of mechanical prostheses was associated with a high rate of thrombosis. No significant differences in perioperative or total mortality were found between the different methods used for repair or valve replacement.

January 15th, Friday 2016

0290

Left atrial remodeling after percutaneous left atrial appendage closure

Marie-Lou Dinet* (1), Zakaria Jalal (1), Xavier Iriart (1), Hubert Cochet (1), Pauline Renoux (2), Igor Sibon (2), Jean-Bernard Selly (2), Jean- Benoît Thambo (2)

(1) CHU Bordeaux, Hôpital Cardiologique Haut-Lévêque, Pessac, France – (2) CHU Bordeaux, Neurologie, Bordeaux, France

Corresponding author: marielou.dinet@gmail.com (Marie-Lou Dinet)

Objectives The importance of the left atrial appendage (LAA) on left atrial (LA) hemodynamics is unknown. We sought to evaluate the effect of LAA percutaneous closure (LAAPC) on left atrial remodeling in patients with paroxysmal atrial fibrillation (AF) and permanent AF.

Methods All patients referred for LAAPC with Amplatzer Cardiac Plug (ACP) and Watchman device were enrolled. Cardiac computed tomography (CT) for LA volume measurement and transthoracic echocardiography (TTE) for diastolic function assessment were performed at baseline and 3 months after LAAPC. An average of 3 consecutive measurements were performed for TEE parameters in all patients.

Results Sixty-three patients (mean age 73±9 years) were included. 38% (n=24) in sinus rhythm (SR) at baseline and 55% (n=35) in permanent AF. Patients in SR at baseline and permanent AF at 3 months were excluded (n=4,7%). The mean CHA2DS2-VASc score was 4,3±1,3. There was non significant difference in the functional status and BNP level (155,6±107 vs 150,7±90pg/ml; p=0,85) between baseline and 3 months follow-up. Left atrial volume excluding the LAA (145 ±55cm³ baseline vs 144±50cm³ at 3 months; p=0,30) showed no significant change after 3 months in overall population, neither in the SR (99,7±19,1 vs 103,8±21cm³; p=0,32) or the permanent AF groups (173,2±54 vs 171,7±48,6cm³; p=0,59). MV peak E-wave (84,2±22,7 vs 86,7±22,0cm/s; p=0,62) and A-wave velocities (65,4±14,4 vs 68,5±22,2cm/s; p=0,66) dit not differ between baseline and follow-up but E/E’ ratio was increased in the overall population after LAAPC (7,9±2,1 vs 9,1±3,6cm/s; p=0,05).