

CONCLUSION The percentage of patients aged ≥ 80 years in LAAC series may significantly affect the incidence of major bleeding beyond that expected according to the HAS-BLED score, due to the high frequency of GI bleeding.

CRT-700.41

Differences in the Percentage of Events Per Patient-year After Left Atrial Appendage Closure. Results of the II Iberian Registry



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INTRODUCTION AND OBJECTIVES Many patients with non-valvular atrial fibrillation (NVAF) are still left without protection due to a contraindication for anticoagulants (OACs). Although closure of left atrial appendage (LAA) can reduce the thromboembolic/bleeding events and mortality in these patients, a better understanding of their natural history is needed. This study aimed to establish the occurrence of stroke and major bleeding events in patients with NVAF and LAA closure with medium (<24 months) and long-term (>24 months) follow-up.

METHODS Analysis of a multicenter single cohort prospectively recruited from 2009 to 2015. Thromboembolic and bleeding events were compared with those expected from CHA₂DS₂-VASc and HAS-BLED scores and according to follow-up duration. Multivariate analysis examined variables associated with mortality during follow-up.

RESULTS A total of 598 patients with a contraindication for oral anticoagulants (OACs) were recruited (median 75.4 years). LAA closure device implantation success was 95.8%. Thirty patients (5%) experienced periprocedural complications. Results based on a <24- or >24-month follow-up: deaths: 13.1% vs. 4.6% ($p < 0.001$); ischemic stroke: 2% vs. 1.5% ($p = 0.514$; expected: 8.4%); intracranial hemorrhage: 1.7% vs. 0.4% ($p = 0.297$); gastrointestinal bleeding: 7.9% vs. 1.2% ($p < 0.030$); major bleeding: 7.6% vs. 2.6% ($p < 0.006$; expected: 6.3%). Age (HR 1.1), intracranial hemorrhage (HR 6.8) and stroke during follow-up (HR 2.7) were significantly associated with higher mortality.

CONCLUSION LAA closure significantly reduced the incidence of stroke from the first year. Reduction of bleeding events became significant after longer follow-up. Intracranial hemorrhage, age and stroke during follow-up were associated with higher mortality.

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Etiologies, Trends and Predictors Of Readmission After Left Atrial Appendage Occlusion



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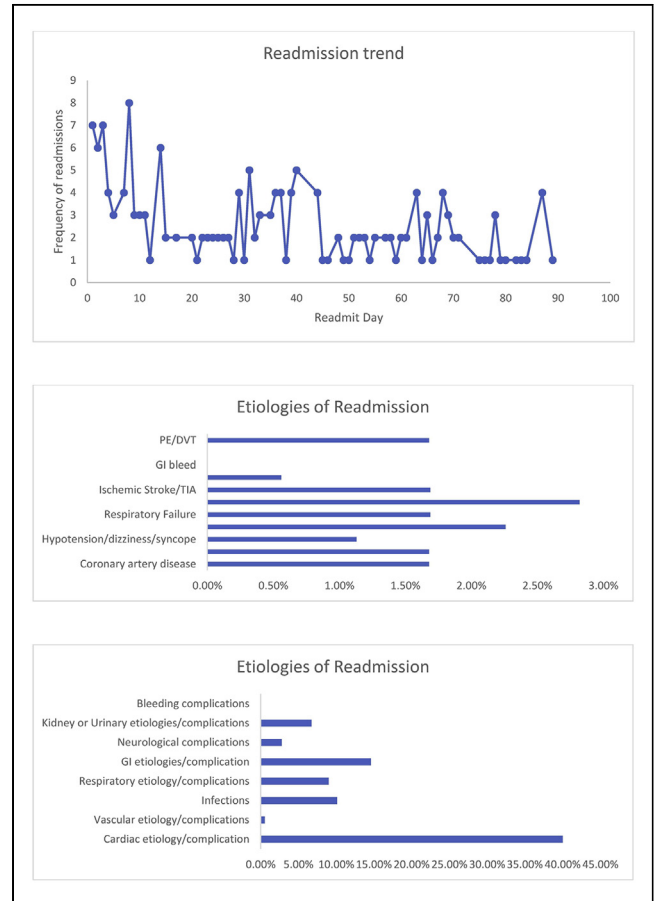
INTRODUCTION Left atrial appendage occlusion (LAO) is approved for non-valvular atrial fibrillation (AF) in patients who are at high risk of stroke but unable to tolerate anticoagulation. We studied the causes and predictors of readmission after LAO.

METHODS National Readmission Database (NRD) 2013 to 2014 was utilized to select study cohort. International Classification of Diseases, 9th revision (ICD-9CM) procedure code 37.90 was used. Admission within 90 day of index admission was considered as early readmission. Hierarchical two-level logistic models were used to evaluate outcomes.

RESULTS Among study cohort (n=1209), 20.3% (n= 246) were readmitted within 90 days of discharge following index admission. Most common etiologies for readmission were cardiac (40.04%, Heart failure-14.67%), respiratory (9.01%), GI (14.62%). Ischemic stroke/TIA happened in 1.69% of patients. Highest number of readmissions happened on 8th day after discharge (n= 8). Significant predictors of

readmission were Anemia (OR 2.09, 95% CI 1.25-3.4), Peripheral vascular disease (OR 2.26, 95% CI 1.29-3.9).

CONCLUSION We identified high-risk population for readmission following LAO as well as trends and most common causes of readmission, which could be utilized to implement individualized health care transition to reduce readmission, related cost.



CRT-700.43

Incidence, Predictors and Prognostic Value of Acute Kidney Injury Among Patients Undergoing Left Atrial Appendage Closure



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BACKGROUND No data exist on the occurrence of acute kidney injury (AKI) after left atrial appendage closure (LAAC). The aims of this registry were to determine the incidence, predictors and prognostic value of periprocedural AKI after LAAC.

METHODS A total of 355 patients undergoing LAAC were included in the study. Acute kidney injury was defined as an absolute or a relative increase in serum creatinine of >0.3mg/dl or $\geq 50\%$, respectively, after the procedure or the need for haemodialysis during index hospitalization.

RESULTS The incidence of AKI was 9%, and patients with worse baseline renal function were at higher risk of developing AKI (OR: 1.32, 95% CI 1.09-1.61, $p=0.004$ for each 10ml/min decrease in the glomerular filtration rate). In-hospital bleeding events occurred more frequently in the AKI group (5.3% versus 15.6%, $p=0.037$). After a median follow-up of 18 months, patients in the AKI group had a higher mortality (HR 2.59, 95% CI 1.36-4.92, $p=0.004$), more embolic events (HR 6.14, 95% CI 2.23-16.92, $p=0.001$) and major bleeding events (HR 2.36, 95% CI 0.89-6.24, $p=0.083$). The occurrence of AKI was an independent predictor of mid-term mortality (HR 2.00, 95% CI 1.02-3.91, $p=0.044$).

CONCLUSION The occurrence of AKI is relatively frequent in patients undergoing LAAC, and patients with lower renal glomerular filtration rate were at high risk of developing this complication. Acute kidney injury was correlated with worse mid-term outcomes, highlighting the importance of further preventive strategies in this population.

MITRAL VALVE

CRT-700.46

Mitral Balloon Valvuloplasty: Risk Factors for Lack of Success, Severe Mitral Regurgitation and Major Complications



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BACKGROUND Mitral balloon valvuloplasty is not always successful and free from complications.

OBJECTIVES To determine the independent risk factors for an unsuccessful procedure, severe mitral regurgitation and major complications in mitral balloon valvuloplasty.

METHODS Longitudinal prospective study of 518 mitral balloon valvuloplasties performed between July 6, 1987 and December 31, 2004, on 429 (82.8%) female patients and 89 (17.2%) male patients with a mean age of 37.5±12.8 years. Major complications were considered to be perforation with cardiac tamponade, stroke and severe mitral regurgitation per procedure. The continuous variables were transformed in categorical variables and the chi-square or Fisher exact tests to compare the categorical variables, and logistic regression and multiple logistic regression were used to identify independent factors for predicting success, incomplete procedure, severe mitral regurgitation and major complications.

RESULTS Success was noted in 452 (94.2%) procedures, with major complications occurring in 22 (4.2%) patients, of which 10 were severe mitral regurgitation; there were no per-procedure deaths, with 4 (0.8%) in-hospital deaths. In the multiple logistic regression, lower age predicted success in the procedure; the only variable that predicted an incomplete procedure was the initial period of the procedure, and a score >11 points predicted severe per-procedure mitral regurgitation. There was no independent predictor of major complications in this study.

CONCLUSIONS Success was related to younger patients, an incomplete procedure to the initial period of the procedure and severe per-procedure mitral regurgitation to an echocardiography score >11 points

CRT-700.47

Long-term Follow-up of Percutaneous Mitral Valvuloplasty With Single Balloon Technique: Survival and Event-free Survival



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BACKGROUND Mitral balloon valvuloplasty with Inoue balloon is the worldwide accepted procedure technique. The aims of this study is to evaluate the long-term follow-up (FU) of mitral balloon valvuloplasty (MBV) with Balt single balloon (BSB) technique and to determine independent predictors of survival and event-free survival (EFS).

METHOD From 1987 to 12-31-2013, 526 procedures of MBV were performed, 404 (77.1%) with BSB. There were 256 procedures with long-term FU. Balloon diameter was 25 mm in 5 procedures and 30 mm in 251. Mean dilatation area was 7.02±0.30 cm². FU was 156 ± 144 months. Multivariate Cox analysis was performed to determine IPS and EFS.

RESULTS Mean age was 38.0±12.6 (13 to 83) years, 222 (86.7%) female gender, 215 (84.0%) sinus rhythm, echo score (ES) 7.2±1.5 (4 to 14) points and echo mitral valve area (MVA) pre-MBV 0.93±0.21 cm². Mean pre and post-MVA (Gorlin): 0.90±0.20 and 2.02±0.37 cm², respectively ($p<0.001$). Success (MVA ≥1.5 cm²): 241 (94.1%) procedures. Mean pulmonary artery pressure pre and post-MBV: 27±10 and 20±7 mmHg, respectively. Three (1.2%) patients began the FU with severe mitral regurgitation (SMR). At the end of FU 119 (46.5%) patients were in NYHA functional class (FC) I; 70 (27.3%) in FC II; 53 (20.7%) in FC III; 3 (1.2%) in FC IV; 11 (4.3%) deaths; 17 (8.2%) patients with SMR; 20 (4.7%) were submitted to a new MBV; 27 (10.5%) to mitral valve surgery and 70 (26.3%) without any medicine. Independent predictors of survival were: ES ≤8 points ($p<0.001$, HR 0.116, 95% IC 0.035-0.384), age ≤50 years old ($p=0.011$, HR 0.203, 95% IC 0.059-0.693) and absence of mitral valve surgery in the FU ($p=0.004$, HR 0.170, 95% IC 0.050-0.571). Independents of EFS were: absence of prior commissurotomy ($p<0.002$, HR 0.318, 95% IC 0.151-0.667), female gender ($p=0.036$, HR 0.466, 95% IC 0.229-0.951) and MVA post-MBV ≥1.50 cm² ($p<0.001$, HR 0.466, 95% IC 4.884-28.457).

CONCLUSIONS Success in 94% of procedures. At the end of follow-up (25 years) only 4.3% of mortality. The independent predictors of survival were ES ≤8 points, age ≤50 years old and absence of mitral valve surgery in the FU. Independent predictors of EFS were absence of prior commissurotomy, female gender and MVA post-MBV ≥1.50 cm²

CRT-700.48

Prior Surgical Mitral Commissurotomy And Echocardiographic Score Influence in Mitral Balloon Valvuloplasty. Immediate Post-Procedure Results



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INTRODUCTION Percutaneous mitral balloon valvuloplasty is effective in mitral stenosis.

OBJECTIVES To evaluate prior mitral surgical commissurotomy (PMC) and echocardiographic score (ES) in the results and complications of mitral balloon valvuloplasty (MBV).

METHODS From 1987 to 2013, 526 procedures were performed with Inoue balloon, double or single Balt balloon technique, 480 without PMC named primary MBV group (PMBVG) and 46 that have been submitted to PMC, the PMC group. The PMCG was older than PMBVG (42.7±12.4 vs 36.9±12.5 years, $p=0.0030$). Gender, atrial fibrillation and NYHA functional class were similar. In PMBVG and PMCG, respectively, ES were 7.2±1.4 and 7.7±1.5 points ($p=0.0158$) and mitral valve area (MVA) 0.94±0.21 and 1.00±0.22 cm² ($p=0.0699$).

RESULTS Pre-MBV: mean pulmonary artery pressures (MPAP) were 37.8 ± 14.2 and 37.6 ± 14.4 mmHg, $p=0.9515$; mean gradient (MG) 19.6 ± 6.9 and 18.3 ± 6.9 mmHg, $p=0.2342$; MVA 0.90 ± 0.21 and 0.93 ± 0.19 cm², $p=0.4092$, respectively, when comparing PMBVG and PMCG. Post-MBV: MPAP were 26.8 ± 10.2 and 26.6 ± 10.9 mmHg, $p=0.9062$; MG 5.4 ± 3.5 and 6.3 ± 4.2 mmHg, $p=0.1492$; MVA 2.04 ± 0.42 and 1.92 ± 0.41 cm², $p=0.0801$, respectively. Mitral regurgitation (MR) was similar pre- and post-MBV. There was Severe MR post-MBV in 10 patients: 8 in PMBVG and 2 in PMCG, $p=0.2048$. As there were no significant differences found, the total group was divided in ES ≤ 8 and >8 groups: Pre-MBV: MPAP 37.5 ± 13.9 and 39.3 ± 16.6 mmHg, $p=0.4041$; MG 19.7 ± 6.8 and 18.3 ± 7.3 mmHg, $p=0.1753$; MVA 0.90 ± 0.21 and 0.94 ± 0.20 cm², $p=0.0090$ respectively. Post-MBV: MPAP