mechanism. A transfemoral, trans-septal procedure was performed under both angiographic and echocardiographic (ICE) guidance, for implantation of the device.
Results: In the ovine model (n=12), the device measured LAP in acute and chronic studies. All procedures were performed safely with no device or system-related complications. Measurements of LAP vs. PCWP were performed at Index Procedure, two weeks, one and two months post-implantation and demonstrated good accuracy, the correlation is R2=0.73. The safety and performance were demonstrated in long term follow up to 14 months.
Pathological analysis following 1 week and 6 months post-implantation (Figure 1.) showed an intact device, there was no evidence of thrombus formation in any of the chambers, and no damage to adjacent structures was observed. The implant in the 6M sample was well fixated and endothelialized on both sides of the anchor with no associated significant inflammation.
Conclusions: the V-LAP left atrial pressure monitoring system demonstrated excellent results in animal studies. The procedure proved to be safe, feasible, and shows good correlation with PCWP in both acute and chronic measurements.

P1065

Home monitoring implantable devices in heart failure patients: economic analysis of our experience

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Background: remote monitoring is a simple and safe way to assess device functions and heart failure parameters in patients implanted with wireless transmission-enabled ICD.
Method: we analyzed 237 heart failure patients implanted with wireless transmission-enabled ICD/CRT-D, following them with remote monitoring for a mean time of 29 months. The follow up in our Lab was done by a trained nurse daily and reviewed by electrophysiologist. The economic analysis was conducted using the specific public tariffs from the diagnosis-related groups (DRG) system of the Italian health authority.
Results: on 1666 scheduled transmissions (ST) we performed 78 in-office visits with a total cost of 1852.50€ for the health care system (23.75€/visit, according to Italian Health System refund). In 189 cases, only a phone call was performed by nurse. No action was required in 1399 transmissions.
We had also 1127 unscheduled-transmissions (UST) related to atrial fibrillation (16%), ventricular tachycardia or ventricular fibrillation (18%), hearth failure alarms (15%), device related problems (5%) and low biventricular pacing (9%). The UST population required 110 in-office visits for checking patient's status or reprogramming the device, with a cost of 2612€.
Emergency room (ER) reports in our hospital showed that standard FU brings to EP Lab about 10% of the patients after an ICD alarm. The cost for health care system is about 27048€. By standard FU (2 in-office visits/year) we would have been only 743 scheduled follow up in our population with a cost of 17645€. This should be added to the cost of ER visits (240€/each) with a total amount of 44693€. The follow up costs of remote monitoring is 12887€ according to Italian Care System (nurse cost for electronic screening and phone calls and cost for physician's in-office visits).
The trained nurse work took 296 hours to screen all transmissions (5 minutes/transmission). Physician in-office visits required 36 workin hours (20 minutes/visit). In standard follow up nurse and physician are both employed for 247 hours.
Conclusions: remote monitoring in heart failure patients is cost-effective, time saving and improves the quality of life of the patients compared to standard follow up. We think its use has to grow up in the future.

P1066

Predictors of atrial fibrillation detection in patients with implantable loop recorders for cryptogenic stroke

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Background: Early detection of the etiology of an ischemic neurologic event (INE) as atrial fibrillation (AF) with institution of appropriate therapy can reduce its recurrence by 60% and reduce morbidity and mortality significantly. Echocardiographic parameters that have been associated with a higher risk of developing clinical AF have not been evaluated in the population of cryptogenic INE patients in regards to their predictive value for detecting AF during prolonged cardiac monitoring.
Purpose: To identify clinical and echocardiographic parameters that predict a high likelihood of AF detection in patients with ILR for evaluation of cryptogenic INE.
Methods: A retrospective cohort of patients from our remote monitoring clinic that had an ILR implanted between 4/1/2014 and 7/30/2016 for the indication of cryptogenic stroke was analyzed. Clinical and echocardiographic data were reviewed from medical records. Patients were grouped into those with AF detected and AF not detected for comparison. Continuous variables were compared using an unpaired t-test. Univariate and multivariate logistic models were used for risk factors to predict the odds of AF.
Results: A total of 41 patients that had an ILR implanted for an indication of cryptogenic stroke were analyzed. Among these, 17 patients had an AF event detected for a total detection rate of 41% during their monitoring period. Mean age of the cohort was 71±10, with no significant difference between groups. Mean total duration of follow up was 11±7 months. The E/e', E/A ratio, mitral inflow peak velocities, LVEDd, LVESd, LVSWd, and LVPWd were not significantly different between the two groups in predicting AF detection. CHADS2VASc score of greater than was an independent predictor of AF detection on multivariate analysis.
Conclusion: Among patients with ILRs for cryptogenic stroke, prolonged monitoring increased the detection rate of AF but did not predict AF detection per se. Further studies are needed to elaborate the findings of our study.

P1067

AF detection using smartphone apps

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Background: The stroke risk that atrial fribrillation (AF) confers, and the availability of effective preventive treatment justifies population screening for AF. Smartphone apps that require no additional peripheral device for detection of AF are currently available as tools for use by the general public, however, their accuracy is unclear.
Methods: Patients were recruited from inpatient wards and outpatient clinics. All underwent a 12 lead ECG and responded to a questionnaire. Two smartphones apps were tested; Beatscanner which utilises the built in accelerometer and gyroscope sensors in a smartphone device and Preventicus, which uses the smartphone's camera function. Exclusion criteria included sinus arrhythmia, paced rhythms and premature ectopic beats.
Results: 70 patients in an AF rhythm and 70 patients in sinus rhythm were recruited. Mean age was 73±12 (60% male) in the AF group, 59±20 in the sinus rhythm group (66% male). The BeatScanner app had a sensitivity of 89% (95% CI: 79-95%) and specificity of 67% (55- 78%). The Preventicus app had a sensitivity of 94% (86- 98%) and specificity of 96% (88-99%). There were 83/140 (59%) regular smartphone users, among whom 94% were interested in using their smartphone to self-screen for AF and 55% would pay for an app to do so. Almost all (96%) found the apps easy to use and 63% preferred the Preventicus app to the BeatScanner app.
Conclusions: In a selected sample of hospital patients, the Preventicus app was more accurate for discriminating between AF and sinus rhythm than the BeatScanner app and was preferred by patients. Using the smartphones intrinsic function is a promising, simple and acceptable means of self-screening for AF.

REGISTRIES AND SURVEYS

P1068

Implantable cardioverter defibrillator in ischemic cardiomyopathy: appropriate therapies and mortality in real life

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Background: In previous trials implantable cardioverter defibrillator (ICD) appropriate shocks (A-Sh) had been associated with higher mortality. On the other hand, data about appropriate ATP (A-ATP) is inconsistent.
Purpose: To determine, in a long term follow up of patients (p) with ICD for ischemic cardiomyopathy (IC), the association between appropriate therapy (AT), A-Sh and A-ATP with mortality.
Methods: From a prospective registry, between January 2007 and August 2016, 356 p with IC were implanted with an ICD for primary (PP) or secondary prevention (SP) of sudden cardiac death (SCD). Baseline characteristics of p without AT (n: 273) and with AT (n: 83): male 246 (90%) vs 75p (90%) p=NS, age 65±11 vs 64±10years p=NS, PP 207 (76%) vs 39p (47%) p<0.001, SP 66 (24%) vs 44p (53%) p<0.001, NYHA FC I 130 (48%) vs 42p (51%) p=NS, NYHA FC II 108 (40%) vs 34p (41%) p=NS, NYHA FC III 33 (12%) vs 6p (7%) P=NS, AF 37 (14%) vs 11p (13%) P=NS, LBBB 56 (21%) vs 19p (23%) P=NS, QRS 112±34 vs 120±33ms p=NS, LVDD 64±9 vs 63±11mm p=NS, LVEF 28±8 vs 30±9% p=NS, creatinine 1.25±0.5 vs 1.25±0.5mg% p=NS, beta-blockers 262 (96%) vs 77p (93%) p=NS, ACEi/ARB 243 (89%) vs 72p (87%) p=NS, mineralocorticoid receptor blockers 219 (80%) vs 67p (81%) p=NS and amiodarone 124 (45%) vs 45p (54%) p=0.01, respectively.
Overall (OM), cardiovascular (CM) and non-cardiovascular mortality (N-CM) was compared among p without vs with AT, without AT vs with A-Sh and without AT vs with A-ATP. P who underwent heart transplant or up-grade to CRT-D were excluded from mortality analysis. Mean follow up: 44±38 months.
Results: During the follow up, 83 p (23%) received AT, 63 (18%) A-Sh and 45 (13%) A-ATP.
Conclusions: P with AT had higher HF mortality than p without AT. P with A-Sh had higher CM and HF mortality than p without AT. There was no difference in mortality between p without AT and with A-ATP only.

Table 1. Mortality outcomes

	Without AT (n: 237)	With AT (n: 72)	p	With A-Sh (n: 56)	p	With A-ATP only (n: 17)	p
OM	51 (22%)	19 (26%)	0.3	17 (30%)	0.1	2 (12%)	0.3
CM	23 (10%)	12 (17%)	0.1	11 (20%)	0.03	11 (9%)	0.6
HF	20 (8%)	12 (17%	0.04	11 (20%)	0.01	1 (6%)	0.7
AMI	1 (1%)	0	0.5	0	0.6	1 (6%)	0.7
SCD	2 (1%)	0	0.4	0	0.4	0	0.7
N-CM	28 (12%)	7 (10%)	0.6	6 (11%)	0.8	1 (6%)	0.4

Comparison between p without vs with AT, without AT vs with A-Sh and without AT vs with A-ATP.
HF: Heart failure and AMI: Acute myocardial infraction