Discussion: Contemporary guidelines on implantable cardioverter defibrillator (ICD) therapy do not specifically address recommendations for secondary prevention after life-threatening ventricular arrhythmias due to vasospasm. The arrhythmic risk of coronary vasospasm is variable, ranging from 2% to 17%. Risk stratification is important to effectively identify high-risk patients who may benefit from ICD implantation. A risk prediction score has been developed by the Japanese Coronary Spasm Association (JCSA) that includes: out of hospital cardiac arrest (4 points), smoking history, documented angina, significant coronary stenosis, or multi-vessel spasm (2 points each), ST-segment elevation or spasm while on beta blocker therapy (1 point each). Patients who score $\geq$6 are at the highest risk, with a predicted risk of major adverse cardiac events of 13%. However, this score was developed and validated in an East Asian population and there is no proof for its applicability to other ethnicities. In this case, the risk of malignant arrhythmia recurrence was considered to be low (2) according to the JCSA risk score and a reversible cause for the arrhythmia was identified and effectively treated making very low the probability of recurrence. Therefore, an implantable cardioverter defibrillator was not implanted. This clinical case highlights the importance of identifying the cause of an arrhythmic episode in order to introduce an effective therapy. Moreover, it underlines the importance of properly stratifying the arrhythmic risk before considering the implantation of an implantable cardioverter defibrillatoarg.

749 Age-related differences in oral anticoagulant therapy between Italian and Western Europe countries patients with non-valvular atrial fibrillation. Insights from the GLORIA-AF registry

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Introduction: Atrial fibrillation (AF) is the most frequent sustained arrhythmia found in clinical practice. Despite the association of AF with thromboembolic (TE) events, and with dementia, the use of oral anticoagulant therapy (OAC) is still unsatisfactory. Non-Vitamin K oral anticoagulants (NOACs) could allow a wider use of OAC. The aim of this study was to compare the clinical characteristics of NVAF patients taking NOACs or Vitamin K antagonists (VKA) in Italy and in the other Western Europe Countries (OWE).
Methods: The Global Registry on Long-Term Antithrombotic Treatment in Patients with Atrial Fibrillation (GLORIA-AF) Registry Program is a large, global, prospective study, involving newly diagnosed AF patients with >1 stroke risk factors. The registry consists of three overlapping phases. Present analysis refer to the baseline characteristics in GLORIA-AF Phase III, including all eligible patients, independently of the prescribed OAC. Patients were also stratified into two age-groups (<75 and >75 years). Comparisons of baseline characteristics and antithrombotic therapy between Italy and OWE were based on standardized differences (SD; unbalanced distributions for values >0.10).
Results: Between 2014 and 2016, 9135 (43.0%) patients out of 21, 248 in Phase III were enrolled from Western European countries. Italian and OWE subjects were 1378 and 7757, respectively. Patients in the age group of >75 years were 47.8% (N = 659) and 44.8% (N = 3473) for Italy and OWE, respectively. No differences in age, gender and TE risk were noticed by area of origin both in the younger (Italy—age: 65 ± 8 years; men: 61.5%; CHA_2DS_2-VASc score: 2.4 ± 1.2 / OWE—age: 65 ± 7 years; men: 61.5%; CHA_2DS_2-VASc score: 2.5 ± 1.2) and in the older (Italy—age: 81 ± 5 years; men: 45.8%; CHA_2DS_2-VASc score: 4.2 ± 1.2 / OWE—age: 81 ± 5 years; men: 48.1%; CHA_2DS_2-VASc score: 4.3 ± 1.3) group. In the whole population, OAC was less adopted in Italy compared to OWE (84.0 vs. 90.6%, SD=-0.20). Regarding the <75 years group, OAC was prescribed less frequently in Italian than in OWE patients (80.4 vs. 90.2%; SD=-0.28). This was especially true for NOACs (49.8 vs. 67.6%; SD=-0.37). Also the use of antiplatelet therapy (9.0 vs. 4.6%) and the lack of any anti-thrombotic drug (10.6 vs. 5.2%) were more common in the younger Italian subjects. In the >75 years population, no differences existed between Italy and OWE in the prescription of oral anticoagulants (87.9 vs. 91.1%) and, especially, of NOACs (60.5 vs. 63.5%). The proportion of those taking antiplatelets did not differ between older Italian and OWE (6.4 vs. 4.9%) subjects; the same was true for those not receiving any drug (5.8 vs. 4.0%). On the whole, lower dosages of NOACs were more frequently found in Italian patients as compared to OWE patients, particularly in those treated with rivaroxaban 15 mg QD (29.8 vs. 16.6%; SD = 0.32) and apixaban 2.5 mg BID (28.6 vs. 20.2%; SD = 0.20). Small differences were observed for dabigatran 110 mg (47.2 vs. 40.7%; SD = 0.13). These findings can be explained by a more frequent use of the lower NOACs doses in >75 years Italian patients. Proton pump inhibitors (PPI) for gastric protection were more often chosen in Italy than in OWE (43.0 vs. 29.0%; SD = 0.30) independently of age and OAC.
Conclusions: GLORIA-AF Phase III results show the existence of relevant differences in OAC use between Italy and other Western European Countries. Older Italian NOACs users more often receive the lower dosages of the drugs. The prevalence of those not taking anticoagulants is still high, highlighting the importance of a better AF management in routine clinical practice.

845 Preventing sudden cardiac death (SCD) with subcutaneous ICD (S-ICD): a single-centre experience

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Introduction: Despite the evolution of transvenous implantable cardioverter defibrillator (ICD) during the last 30 years, associated short- and long-term risks (e.g. surgical complications, lead malfunctions and infections) remain unacceptably high. In the attempt to overcome such limitations, subcutaneous implantable cardioverter defibrillator (s-ICD) became available for clinical use since 2009 providing a valuable alternative to transvenous ICDs in patients without pacing needs.
Aim of the Study: To study the efficacy and safety of s-ICD in real world cohort of patients consecutively implanted at a single high-volume Institution.
Results: 62 patients (female = 8, 12.9%) underwent s-ICDs implantation between 2014 and 2019. Mean age at implant was 53 yrs (±14yrs) and primary prevention of SCD was the main indication (40 patients, 64.5%). Underlying aetiology of cardiac disease was mostly ischaemic (27 patients, 43.5%) followed by non-ischaemic cardiomyopathy (17 patients, 27.4%). Patients with channelopathies and genetic cardiac disease were implanted less frequently (e.g. Brugada syndrome in 7 [11.3%] patients, hypertrophic cardiomyopathy in 3 [4.8%] patients) Idiopathic ventricular fibrillation was the indication to s-ICD implantation in 4 patients (6.5%). In 6 patients, a permanent transvenous device was already in place and required extraction and replacement with a s-ICD for infective causes in 4 cases (6.4%). Mean left ventricular ejection fraction (LVEF) at the time of implant was moderately reduced (LVEF = 38±15%). Background medical therapy was overall well balanced (beta-blockers, ACE-I/ARB, MRA used respectively in 80.9%, 67.7% and 53.2% of patients). During defibrillation threshold test, sinus rhythm was successfully restored after first shock in all but three cases in which the opposite polarity defibrillation was used. Overall, mean time to sinus rhythm restoration was 16 seconds (±4 seconds). In two patients (3.2%) induction test was not performed based on clinical decision (i.e. intraventricular thrombus, recent ab-ingestis pneumonia), while in 9 (14.5%) patients the standard protocol did not induce sustained arrhythmias. At median follow-up of 12 months [25°-75° IQR, 3 months-27 months], 8 (9.6%) patients received an appropriate shock (6 for sustained VT, 2 for VF) with 100% restoration of sinus rhythm after single shock whereas 3 (4.8%) patients underwent inappropriate shocks (two caused by myopotentials oversensing). During follow-up, two patients died (one for cardiovascular cause - pump failure), while 19 were admitted for cardiovascular causes (mainly for hearth failure decompensation). Only 4 patients (6.4%) suffered from minor complications linked to s-ICD implant: one subxiphoid keloid (surgically treated), one iatrogenic lead damage during cardiac surgery (requiring new lead implantation), one lead dislodgement (surgically treated) and one mild hematoma (treated conservatively). Duration of s-ICD implantation became significantly shorter with time (mean procedural time during the first three years = 102 minutes vs. mean procedural time during the second three years = 82 minutes) and preference for inframuscular instead of subcutaneous implantation was observed.
Conclusions: Based on our experience, the use of s-ICD for SCD prevention (both in primary and secondary setting) is effective, with very low complication rates at medium term follow-up. The implantation learning curve is relatively steep: short procedural times, minimal surgical incisions, excellent cosmetic results are achievable after a limited number of procedures.

676 Cardiac resynchronization therapy in patients with permanent atrial fibrillation

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Introduction: The benefits of cardiac resynchronization therapy with defibrillator (CRT-D) in heart failure are well established. However, a gap of evidence is still present for patients with permanent atrial fibrillation (perm-AF).