(27±5.6) and the same rate of atrial fibrillation history (28%; p= 0,99) between severe LA dilatation (SLAD) group and non-severely LA dilatation (NSLAD) group. Appropriate therapy incidence was 28% in SLAD group, while 14% in NSLAD. A statistically significant association between LAVI and appropriate therapies was found (HR 2.19, 95% CI 1.07–4.5; p = 0.02). Similarly, appropriate shocks (21% in SLAD group vs 9%; HR 2.76, 95% CI 1.2-6.8; p = 0.03). Regarding the secondary endpoint, the incidence of inappropriate shocks was statistically similar between groups (p=0.28). History of atrial fibrillation was a predictive factor of inappropriate shocks (H.R. 2.7, 95% CI 1.14–6.47, p = 0.038). LAVI was correlated with atrial fibrillation: 63% of patients with LAVI > 48 ml/m^2; 84% of patient with LAVI ≤48 ml/m).

Conclusion. The present study highlights the role of left atrial dilatation in primary prevention ICD carriers. LAVI is a predictive factor for higher incidence of appropriate therapies possibly due to its impact on LV filling pressure and stiffness. As far as we know, our study improves upon literature results by enrolling more patients with a longer follow-up period. Therefore, in patients with the same ejection fraction, severe left atrial dilatation could be considered an additional predictive factor to confirm ICD primary prevention implantation in CAD and IDC patients, without being discouraged by the risk of inappropriate shocks in the absence of atrial fibrillation.

A581: INTER-OBSERVER AND INTRA-OBSERVER AGREEMENT IN DIAGNOSIS OF TYPE 2 BRUGADA PATTERN

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Introduction. Brugada syndrome (BrS) is a disorder characterized by increased risk of sudden death associated with definite ECG abnormalities (J wave, elevated ST segment) confined to the right precordial leads (V1 to V3), in the absence of structural heart disease. While type 1 BP diagnosis is often simple, differentiation of Type 2 BP from incomplete right bundle branch block (IRBBB) can be insidious. The aim of our study was to assess inter-observer and intra-observer agreement in the diagnosis of type 2 BP in a cohort of cardiologists with different skills.

Methods. We proposed these 14 ECGs to 42 partecipants belonging to Italian centers: 14 arrhythmologists, 14 general cardiologists and 14 electrophysiology (EP) fellows. Every ECG was showed with the standard 12 leads, accompanied by V1 and V2 recorded at the 3rd or 2nd intercostal spaces or both. Evaluators were asked to determine whether each ECG was a Type 2 BP, so needing further assessment with Class I drug test, or an IRBBB (no further assessment needed). No clinical data about the patient were revealed to the participants, to avoid any suggestions. The same 14 ECGs, with a different order, were proposed fifteen days later to the same cohort to assess intra-observer variability. *Statistical analysis.* Inter-observer results were calculated using a Fleiss K. Intra-observer results were calculated using Cohen's K. The strength of agreement was categorized according to Landis and Koch. A K value <0.00 was rated poor; 0.00-0.20, slight; 0.21-0.40, fair; 0.41-0.60, moderate; 0.61- 0.80, substantial; and 0.81-1.00, almost perfect.

Results. In all three groups k value was <0.20 assessing only a slight agreement between partecipants of any categories. Agreement between diagnosis of the first and the second round of the survey, respectively for 5 arrhythmologists, 5 general cardiologists and 5 EP fellows, was calculated. Totally, a wide variability in k values was found in all groups. Arrhythmologists showed an intra-observer agreement ranging from fair to almost perfect. It seems slight better than general cardiologists and EP fellows, showing widest variability, from poor to moderate for general cardiologists and from poor to almost perfect for EP fellows.

Discussion. Data demonstrated poor reliability of diagnosis of type 2 BP in a cohort of cardiologists with different skills. Nowadays, diagnosis of type 1 BP, although rare, is relatively simple and within the reach of all cardiologists. On the other hand, Cardiologists with different experience are daily facing the question Type 2 BP versus IRBBB in ECGs recorded for preoperative or sports screening. Our study demonstrated, for the first time, a wide inter-observer variability in the diagnosis of type 2 BP in categories of cardiologists with different abilities. Even arrhythmologists showed low agreement. Considering 5 operators per class, intra-observer agreement is fair to moderate overall with a slight superiority of arrhythmologists.

Conclusion. Reproducibility of type 2 Brugada Pattern diagnostic criteria is low, even among experts. These findings raises serious questions about basic screening, not counting the influence of clinical factors in the diagnosis. An initial selection bias may influence data in literature also in terms of risk of arrhythmic events. The extension of the pharmacological test to all patients with a positive terminal wave in V1 V2 turns out to be not feasible in clinical practice and above all not consistent. Thus, new diagnostic criteria with validated reproducibility are probably needed.

A582: EPIDEMIOLOGIC ANALYSIS IN PATIENTS WITH PERSISTENT ATRIAL FIBRILLATION AND SPONTANEOUS RESTORATION TO SINUS RHYTHM: A SINGLE CENTER EVALUATION.

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Background. Atrial fibrillation (AF) is the most commonly encountered supraventricular arrhythmia in an elderly population representing one of the leading causes for stroke, heart failure and all-cause mortality in the world. Historically, electrical cardioversion (EC) has been regarded as a safe and effective procedure in sinus rhythm (SR) restoration in AF patients, especially when AF onset is clearly assessed. Conversely, in the absence of hemodynamic compromise and when AF duration may not be clearly evaluated, a 3-week anticoagulation regimen is mandatory or a trans-esophageal echo (TEE) strategy may be considered, if available. Notwithstanding, in this clinical scenario, some patients may present with spontaneous conversion to SR as assessed during ECG screening before EC.

Aim. The aim of this study was to assess the prevalence of spontaneous restoration to SR in patients with history of persistent AF scheduled for EC. Moreover, specific clinical features have been evaluated in this group of patients.

Methods. From April 2017 to June 2019, 260 consecutive patients (164 M) with persistent AF undergoing a scheduled EC procedure have been considered. Before EC, a 12-lead ECG has been performed for each patient and the spontaneous restoration to SR has been evaluated in the whole number of patients. Nevertheless, clinical data were available for 78 patients only (56 M, mean age 69 ± 12 years) and were considered as follows: age, sex, antiarrhythmic drugs, anticoagulant drugs, prevalence of chronic kidney disease, mean CHA2DS2VASc score, left ventricular ejection fraction (>50%), and left atrial enlargement (indexed volume> 34ml / m2). Moreover these clinical data were compared in patients with spontaneous SR restoration to the ones with persistent AF before scheduled EC.

Results. Spontaneous restoration to SR was found in 65 out of 260 patients (25%). Where clinical data were available, 21 patients out of 78 (27%, mean age 73 ± 7 years) showed spontaneous restoration to SR. In this latter group of 21 patients, the vast majority were older and with a higher CHA2DS2VASc score. As shown in Table 1, comparing all the other clinical data in patients w/wo spontaneous restoration to SR, no statistical significance has been found.

	Spont. SR	EC	p value
Age	73.4 ±7.4	67.6 ±13	0.015
Sex (M)	57%	79%	0.09
NOACs/NVKAs	NOACs 47%	NOACs 76%	0.035
Antiarrhythmic drugs	40% AMIOD.	40% AMIOD.	0.89
Mean CHA2DS2-VASc Score	3.2 +/- 1.3	2.3 +/- 1.5	0,02
FEVS > 50%	18 (85%)	47 (93%)	0.3
LA enlargement (vol. > 34ml/m^2)	18 (85%)	46 (79%)	0.75
CKD	14 (67%)	40 (69%)	0.94

Spontaneous restoration to SR occurs in a non negligible rate of patients (25%) with a history of persistent AF undergoing a scheduled EC. The very preliminary data of our study showed a trend towards a greater probability of spontaneous conversion to SR in patients with higher CHA2DS-VASc in an older population. To confirm these data further studies are required, increasing the number of patients considered.

A583: A NOVEL SCORE USING LEFT ATRIAL VOLUME INDEX, GENDER, AND AGE TO PREDICT THE PRESENCE OF LOW VOLTAGE ZONES IN PATIENTS WITH ATRIAL FIBRILLATION: THE ZENTRALKLINIK BAD BERKA AND UNIVERSITY OF L'AQUILA (ZAQ) SCORE

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Background. Pulmonary vein isolation (PVI) is the most effective therapy for patients (pts) with paroxysmal atrial fibrillation (AF). However, in pts with advanced structural atrial changes (both paroxysmal and persistent AF), substrate modification may be required although the ideal ablation strategy is still debated. Therefore, it would be helpful to assess the presence of substrate in the left atrium (LA) before the ablation. We hypothesized that indexed LA volume (LAVI) is (1) associated with the