Online-only Supplemental Material Files

MATERIALS

Study protocol

Following the diagnosis of TTS, patients were divided into hyperglycemics vs. normoglycemics according to admission blood glucose values (≥140 mg/dl, ≥7.8 mmol/l) (1). For each patient, demographic and baseline clinical data were collected, including age, sex, anthropometric data, cardiovascular risk factors, co-morbidities and medical therapy. All enrolled patients underwent a standard 12-lead EKG, transthoracic echocardiography, laboratory tests (complete blood count, electrolytes, creatinine, glucose, and markers of myocardial necrosis). Sympathetic system activity was assayed by peripheral blood of norepinephrine levels determination and cardiac MIBG scintigraphy, which was performed in a subset of 30 patients who did not present any contraindication to complete the exam. All patients were treated during hospitalization according to the current ESC Position Paper (2). At hospital discharge, patients were managed and followed for 24 months after the acute event as outpatients. Physicians involved in the study protocol reviewed at clinical visits at the 12th and 24th months of follow-up the clinical events in terms of hospitalizations for HF worsening and all-cause of deaths.

Diagnostic criteria for Stressfull events

In TTS patients, we distingueshed the Stressfull Events in emotional and physical stressors (3). The emotional stressors were triggering factors caused by traumatic emotions, panic, fear, anger and anxiety. In this class of stressors we included also those caused by financial or employment problems, and by embarrassment (3). Conversely, we defined physical stressors the triggers linked to physical activities, medical conditions, surgical interventions, pregnancy, alchol consumption, cocaine or opiate withdrawal (3). The abuse of sympato-mimetic drugs and the nervous system conditions that could trigger the acute onset of TTS were also considered in this group (3).

Treatments for hyperglycemia

For patients with blood glucose levels > 180 mg/dl at hospital admission, we started the continuous infusion of 50 IU regular insulin in 50 mL NaCl (0.9% using a Perfusor pump). This therapy was adjusted to keep blood glucose between 140 and 180 mg/dl. Thus, when blood glucose fell to < 140 mg/dl, insulin infusion was tapered and eventually stopped. After the start of the insulin infusion protocol, glycemic control was provided every hour to obtain three consecutive values within the goal range. The infusion lasted until stable normoglycemia and at least for 24 h, and was followed by subcutaneous insulin-based long-term glucose control. Insulin was administered as short-acting insulin before meals and long-acting insulin in the evening with a treatment goal of fasting blood glucose 90 to 126 mg/dl and non-fasting glucose < 180 mg/dl. The above-mentioned subcutaneous insulin protocol was used in diabetic and hyperglycemic patients with blood glucose levels range from 140-180 mg/dl. Among patients with previously known diabetes, oral anti-diabetic drugs - metformin, sulfonylureas, dipeptidyl peptidase 4 inhibitors, sodium-glucose cotransporter 2 inhibitors, and glucagon-like peptide 1 agonists – were stopped at admission. After discharge, all type 2 diabetics patients were treated by Mediterranean diet, essentially plant-based dietary pattern whose greater consumption has been associated with a better metabolic control and higher survival for all-cause mortality (4)

Coronary angiography

Hospital admission physicians thoroughly trained in interventional cardiology, blinded to the study protocol and glucose blood values, performed a coronary angiography in all enrolled patients by radiographic projections with at least two orthogonal views (5). For each enrolled patient, the angiographic left ventriculograms via the left heart catheterization were also evaluated, using a biplane imaging with right anterior oblique (RAO) and left anterior oblique (LAO) projections (5-6).

Transthoracic echocardiography

At hospital admission and discharge, cardiologists fully trained and experienced in echocardiography, blinded to the study protocol and glucose blood values of enrolled patients, performed two-dimensional echocardiography (Philips IE 33 or EPIQ) according to the European Association of Cardiovascular Imaging Guidelines (7). The operators assessed LV wall contractility throughout the echocardiography score (wall motion score index) using the 17^{th}segments classification recommended by the European Association of Cardiovascular Imaging Guidelines (7). To date, the wall motion score index has been used as a semi-quantitative analysis of regional systolic function and to report the precise distribution of the RWMA in patients with TTS (7). However, for each analyzed LV segment, the authors assigned a score based on its motion and systolic thickening via multiple views of the LV wall. Thus, we used a 5-level score defined as follows: score 1=normokinesis or hyperkinesis; score 2=hypokinesis; score 3=akinesis; score 4=dyskinesis; score 5=aneurysm (5-6). Therefore, we derived RWMSI as the sum of all scores divided by the number of LV segments visualized (5,7).

Serum biomarkers analysis

At baseline and for all follow-up duration (12 and 24 months), authors determined the baseline laboratory studies by peripheral blood and enzymatic assays after an overnight fast [glycated hemoglobin 1Ac type (HbA1c) and B type natriuretic peptide (BNP)]. Moreover, inflammatory markers (tumor necrosis factor-α - TNF-α, C reactive protein - CRP, white blood cells - leukocytes and neutrophils count) were measured at baseline and during follow-up (5,8). Finally, for the evaluation of sympathetic tone activity at hospital admission, at hospital discharge, and after 12 and 24 months of follow-up, we measured plasma levels of norepinephrine by high-performance liquid chromatography (5).

MIBG scintigraphy

MIBG myocardial scintigraphy was performed according to the standard protocol at the time of hospitalization and during follow-up (12 and 24 months) to visualize cardiac sympathetic nerve activity in patients with TTS (5,9). Utilizing 123I-MIBG, a norepinephrine analogous, the late heart-to-mediastinum ratio (H/M_{late}) and washout rate (WR) were calculated. The H/M_{late} is an index of global neuronal function due to norepinephrine uptake, while the WR reflects the sympathetic tone. Drugs interfering with 123I-MIBG uptake were withheld, and the thyroid uptake of unbound 123I was blocked with 500 mg of potassium perchlorate given orally 30 min before 123I-MIBG injection (5). However, intravenously at rest, the dose ranging from 148 MBq to 370 MBq of 123I-MIBG was injected. Both planar and SPECT images were acquired 15 min after injection (early) and 4 h after injection (delayed, by the use of a dual-head gamma camera - ECAM Siemens, Erlangen, Germany) equipped with a low-energy, high-resolution collimator. A 20% window was usually centered over the 159-keV photo peak of 123I for imaging. Anterior planar images of the chest for global assessment of cardiac innervation were acquired using a 256x256 matrix. Then, the SPECT images, allowed for regional evaluation, were acquired using a 64x64 matrix over 180˚, from the right anterior oblique position to the left posterior diagonal position. From this imaging, the authors performed quantitative evaluations with a standard protocol as previously described (5). However, we evaluated at baseline and 2 years of follow-up the H/M_{late} and WR in the study cohorts.

The formula to calculate WR was: $WR_{BKG\ corrected} = \frac{(He-Me) - [(Hl-Ml) \times 1.21]}{(He-Me)}$

The BKG is background; H is heart mean counts per pixel; M is mediastinum mean counts per pixel; "e" is early; "l" is late; and 1.21 is the correction factor for 123I decay at 3 h and 45 min (10).

Follow up and study endpoints

HF at hospital admission, discharge, and after 2 years of follow-up were evaluated (11). For each enrolled patient, the following parameters were considered at follow-up evaluations: i) the New York Heart Association (NYHA) class, patient's overall condition as unchanged or slightly, moderately, or markedly worsened, or improved since enrollment by global self-assessment (11); ii) medical events or symptoms suggestive of HF (asthenia, dyspnea, weight increase, increased diuretic dose). Pre-specified endpoints were all-cause mortality and heart failure. Heart failure was diagnosed according to the current ESC guidelines (12). Finally, we also evaluated: i) values of inflammatory markers/cells and BNP at baseline, at 12 and 24 months of follow-up; ii) the levels of circulating norepinephrine at baseline, at 12 and 24 months of follow-up; iii) MIBG with the H/M_{late}, and WR at baseline, at 12 and 24 months of follow-up.

Sample size calculation and data collection

For this study, we calculated a sample size of 20 participants for each group, with estimated 80% power to detect a change of 0.015 between the study endpoints of the hyperglycemics and normoglycemics groups at 5% level of significance. A 20% loss due to early withdrawals and non-evaluable measurements was assumed and, combined with the effect of stratification on analysis, resulted in the requirement to recruit at least 20 patients per treatment group.

Moreover, the authors collected the data prospectively from electronic medical records that were used in clinical settings at participants' Institutions. Then, we adopted electronic systems for data capture, collection, and monitoring, with on-site and real timing data entry. Finally, after collecting the patients' files, all data were analyzed.

Statistical analysis

The distribution of values was assessed using Shapiro-Wilks test and the homogeneity of variance using Levene's test. Continuous variables were expressed as means and standard deviations and were tested by a two-tailed Student t-test or Mann–Whitney U test as appropriate. A one-way analysis of variance (ANOVA) was used for more than two independent groups of data. Categorical variables were compared between groups using χ [2] test or Fisher exact test where appropriate.

Cox Regression analysis allowed to calculate in all study population (n=76) the independent predictors of HF event and death, and we calculated the hazard ratios (HR) with 95% confidence intervals. The model was evaluated with Hosmer and Lemeshow test. Survival analysis by the Kaplan Meier method was used to assess hyperglycemia's impact on HF events and death over a 24 month follow-up period. A 2-sided $p < 0.05$ was considered statistically significant. All statistical analyses were performed using the SPSS software package for Windows 25.0 (SPSS Inc., Chicago, Illinois).

Study limitations

In the present study the cohort's dimension could affect the clinical outcomes in patients with TTS, but it is due to the rarity of TTS. We did not assay the serum adrenaline. We mainly focused on serum norepinephrine values, and on norepinephrine heart uptake by the H/M_{late} at 123I-MIBG, as main effector of sympathetic activity. Indeed, 123I-MIBG uses an analogous of norepinephrine (5). On other hand, 123I-MIBG was performed in a subset of 30 patients. Thus, hyperglycemia effects on cardiac adrenergic pathways and the inflammatory molecular/cellular axis should be deeply investigated. Morevoer, we did not investigate HOMA-IR due to populations enrolled, the effects of acute stress, and high fasting plasma glucose level variations that could affect the result interpretation (13,14). Furthermore, due to the small number of diabetic patients, it is not possible to drive any definitive conclusions on the possible and independent effect of hyperglycemia

regardless of diabetes. Multicenter prospective adequately powered studies targeting a considerable number of diabetic patients are warranted.

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Supplemental Tables' legend.

Supplemental Table S1 . SBP = systolic blood pressure; DBP = diastolic blood pressure; HR = heart rate; STEMI = ST-segment Elevation Myocardial Infarction; eGFR-CKDEPI: estimated Glomerular filtration rates-Chronic Kidney Disease Epidemiology Collaboration equation; CRP: C-reactive Protein; TNF-α: Tumor necrosis factor-alfa; BNP: Brain natriuretic peptide; Hb1Ac: glycosylated Hemoglobin, type A1C; LVEDV = left-ventricular-end- diastolic-volume; LVEDV = left-ventricular-end-systolic-volume; LVEF = left ventricular ejection fraction; DAPT: Dual Antiplatelet Therapy; ACEI: Angiotensin converting enzyme inhibitors; ARBs: Angiotensin II receptor blockers; CCB: calcium-channel blockers. * is for statistical significance ($p<0.05$) comparing hyperglycemics vs. normoglycemics.

Supplemental Table S2. BNP: B type natriuretic peptide; CI: confidence of interval; HR: Hazard ratio; LVEF: left ventricle ejection fraction; TNF-α: Tumor Necrosis Factor-alpha. * is for statistical significance ($p<0.05$).

Supplemental Table S3. CRP: C reactive protein; TNF-α: tumor necrosis factor-alpha; BNP: B type natriuretic peptide; Hb1Ac: glycosylated Hemoglobin, type A1C; CK: creatin kinase; eGFR-CKDEPI: estimated Glomerular filtration rates-Chronic Kidney Disease Epidemiology Collaboration equation. We had 3 deaths in hyperglycemics and 2 deaths in normoglycemics at 1 year of follow-up. * is for statistical significance ($p<0.05$) comparing hyperglycemics vs. normoglycemics.

Supplemental Table S4. CRP: C reactive protein; TNF-α: tumor necrosis factor-alpha;BNP: B type natriuretic peptide; Hb1Ac: glycosylated Hemoglobin, type A1C; CK: creatin kinase;eGFR-CKDEPI: estimated Glomerular filtration rates-Chronic Kidney Disease Epidemiology Collaboration

equation. At 2 years of follow-up, we have a total of 7 vs. 4 deaths ($p<0.05$) comparing hyperglycemics vs. normoglycemics. * is for statistical significance ($p<0.05$) comparing hyperglycemics vs. normoglycemics.

Supplemental Tables

Supp. Table S1: Demographic characteristics, co-morbidities, clinical-laboratory-instrumental findings and medical therapy of TakoTsubo patients at baseline, according to glycemic levels.

	Overall N = 76	Hyperglycemics N = 28	Normoglycemics N = 48	p-value
Age, years	67.5±11.1	70.6±7.9	66.6±12.2	0.057
Female sex, n (%)	46 (60.5)	25 (89.3)	41 (85.4)	0.737
BMI Kg/m^2	27.6±4.2	28.3±4.9	26.4±4.9	0.264
Cardiovascular risk factors				
Current smoking, n (%)	35 (46.1)	13 (46.4)	22 (45.8)	0.574
Hypertension, n (%)	11 (14.4)	4 (14.3)	7 (14.6)	0.088
Dyslipidemia, n (%)	9 (11.8)	4 (14.3)	5 (10.4)	0.464
Type-2 diabetes mellitus, n (%)	18 (23.7)	11 (39.3)	7 (14.6)	0.024*
Admission Medical Therapy				
Anti-platelets, n (%)	15 (19.7)	6 (21.4)	9 (18.7)	0.77
DAPT, n (%)	0 (0)	0 (0)	0 (0)	0.99
Vitamin K antagonist, n (%)	0 (0)	0 (0)	0 (0)	0.99
New oral anticoagulants, n (%)	3 (3.9)	2 (7.1)	1 (2.1)	0.27
Beta-blockers, n (%)	18 (23.7)	7 (25)	11 (22.9)	0.83
ACEi, n (%)	21 (27.6)	4 (14.2)	15 (31.2)	0.1
ARBs, n (%)	13 (17.1)	5 (17.8)	4 (8.3)	0.21
CCBs, n (%)	12 (15.8)	6 (21.4)	6 (12.5)	0.3
Statins, n (%)	10 (13.1)	3 (10.7)	7 (14.6)	0.63
Loop diuretics, n (%)	3 (3.9)	1 (3.5)	2 (4.2)	0.63
Thiazide diuretics, n (%)	13 (17.1)	6 (21.4)	7 (14.6)	0.44
Diet Therapy, n (%)	11 (14.5)	6 (21.4)	5 (10.4)	0.18
Oral hypoglycemic agents, n (%)	7 (9.2)	5 (17.2)	2 (4.2)	0.046*
Metformin, n (%)	5 (71.4)	4 (80)	1 (50)	
Insulin secretagoges, n (%)	2 (28.6)	1 (20)	1 (50)	
Insulin Therapy, n (%)	0 (0)	0 (0)	0 (0)	0.99

Clinical presentation				
SBP, mmHg	122.5±25.9	120.8±26.5	123.5±24.3	0.279
DBP, mmHg	77.5±15.9	68.3±13.7	77.1±15.6	0.150
HR (bpm)	92.4±17.1	92.9±19.8	90.1±15.5	0.852
Chest pain, n (%)	25 (32.9)	9 (32.1)	16 (33.3)	0.561
Stressfull event, n (%)				
Emotional, n (%)	23 (30.2)	7 (25)	16 (33.3)	0.606
Physical, n (%)	34 (44.7)	16 (57.1)	18 (37.5)	0.151
Killip-class II-IV, n (%)	14 (18.4)	8 (28.6)	6 (12.5)	0.08
STEMI, n (%)	45 (59.2)	19 (67.9)	26 (54.2)	0.24
Angiographic Results				0.48
Smooth coronary artery, n (%)	55 (72.4)	18 (64.3)	37 (77.1)	
Non-obstructive CAD, n (%)	19 (25)	9 (32.1)	10 (20.8)	
Obstructive CAD, n (%)	2 (2.6)	1 (3.6)	1 (2.1)	
Laboratory data				
Leukocytes, n	10850±866	11067±398	9751±409	0.379
Neutrophyles, n	7377±1134	7878±1073	7088±1080	0.014*
Platelets, n X 10^3	272.75±7.73	282.01±8.05	267.35±7.57	0.429
CRP, mg/dl	2.38±0.33	3.71±0.89	2.01±0.26	0.007*
TNF-α, pg/ml	5.04±0.96	5.69±0.90	4.67±0.75	0.001*
BNP, pd/ml	1178±651	1678±644	886±450	0.001*
Glycemia, mmol/L	7.16±2.13	9.52±1.54	5.78±0.75	0.001*
HbA1c, mmol/L	32.69±1.31	33.15±3.36	32.41±1.40	0.817
Peak Troponin I, ng/L	28.65±3.57	30.99±8.13	27.28±4.48	0.665
Peak CK, UI/L	198.6±13.7	186.1±27.5	205.4±20.3	0.575
Creatinine, mg/dL	0.84±0.27	0.88±0.27	0.81±0.27	0.323
eGFR_CKDEPI,	77.55±21.68	71.84±21.94	80.87±21.03	0.080
Norepinephrine, pg/ml	2047.78±428.08	2192.39±469.53	1963.41±382.16	0.023*
Trans-thoracic echocardiogram				
LVEDV, mm	52.1±9.7	52.2±9.8	52.1±7.5	0.329

LVEF, %	40±9	35±8	42±9	0.011*
LVEF at hospital discharge	46±10	43±8	49±11	0.021*
Mitral reflow				0.54
1, n (%)	43 (56.6)	15 (53.6)	28 (58.3)	
2, n (%)	28 (36.8)	10 (35.7)	18 (37.5)	
3 n (%)	5 (6.6)	3 (10.7)	2 (4.2)	

Discharge Medical Therapy				
Anti-platelets, n (%)	31 (40.8)	13 (46.4)	18 (37.5)	0.477
DAPT, n (%)	4 (5.3)	2 (7.1)	2 (4.2)	0.623
Vitamin K antagonist, n (%)	2 (2.6)	1 (3.6)	1 (2.1)	0.632
New oral anticoagulants, n (%)	2 (2.6)	1 (3.6)	1 (2.1)	0.632
Beta-blockers, n (%)	26 (34.2)	9 (32.1)	17 (35.4)	0.808
ACEi, n (%)	31 (40.8)	10 (35.7%)	21 (43.8)	0.629
ARBs, n (%)	12 (15.8)	4 (14.3)	8 (16.7)	0.528
CCBs, n (%)	15 (19.7)	6 (21.4)	9 (19.1)	0.517
Statins, n (%)	22 (28.9)	8 (28.6)	14 (29.2)	0.585
Loop diuretics, n (%)	3 (3.9)	1 (3.6)	2 (4.2)	0.695
Thiazide diuretics, n (%)	9 (11.8)	4 (21.1)	5 (15.2)	0.708
Diet therapy, n (%)	6 (7.9)	2 (7.1)	4 (8.3)	0.85
Oral hypoglycemic agents, n (%)	8 (10.5)	7 (25)	1 (2.1)	0.015*
Metformin, n (%)	6 (75)	5 (71.4)	1 (100)	
Insulin secretagoges, n (%)	2 (25)	2 (28.6)	0 (0)	
Insulin therapy, n (%)	4 (5.2)	2 (7.1)	2 (4.2)	0.57

Supp. Table S2. Cox Regression analyses for Heart failure (HF) and deaths at 24 months of follow-up.

		MULTIVARIATE ANALYSIS FOR HF			MULTIVARIATE ANALYSIS FOR DEATHS	
Risk factors	**HR**	**CI 95%**	**p value**	**HR**	**CI 95%**	**p value**
BNP	1.000	0.999-1.001	0.306	1.000	0.999-1.001	0.951
Hyperglycemia	1.010	1.003-1.018	0.008*	1.016	1.001-1.031	0.031*
LVEF	0.967	0.934-1.002	0.065	0.992	0.923-1.066	0.820
TNF-α	1.775	1.256-2.510	0.001*	1.736	0.856-3.521	0.126
Norepinephrine	1.001	1.000-1.001	0.035*	1.000	0.998-1.001	0.627

Supp. Table S3: Clinical evaluation and laboratory findings of TakoTsubo patients at 1 year of follow-up.

	Overall N = 71	Hyperglycemics N = 25	Normoglycemics N = 46	p-value
Clinical evaluation				
Systolic blood pressure, mmHg	128.5±27.9	126.8±32.5	129.4±25.1	0.698
Diastolic blood pressure, mmHg	79.5±15.9	68.3±13.7	80.1±15.6	0.641
Heart rate (bpm)	72.9±9.9	74.9±9.6	71.6±10.5	0.145
NYHA class I-II, (%)	69 (97.2)	24 (96)	45 (97.8)	0.65
Laboratory data				
Leukocytes, n	9598±825	9852±398	9108±409	0.321
Neutrophyles, n	6589±821	6895±789	6241±843	0.322
Platelets, n X 10^3	226.41±7.37	226.39±7.53	228.45±7.18	0.243
CRP, mg/ml	1.81±0.45	2.56±0.59	1.08±0.31	0.005*
TNF-α, pg/ml	3.61±0.74	4.11±0.86	2.83±0.65	0.005*
BNP, pg/ml	145±36	151±43	142±29	0.142
Glycemia, mmol/L	6.27±1.58	7.04±1.98	5.83±0.84	0.005*
HbA1c, mmol/L	32.19±1.15	32.52±1.36	31.89±1.22	0.602
Creatinine, mg/dL	0.81±0.21	0.82±0.22	0.79±0.24	0.089
eGFR_CKDEPI,	80.48±28.41	84.61±25.21	88.87±23.11	0.123
Norepinephrine, pg/ml	1273.28±208.19	1583.33±251.13	971.22±162.25	0.042*
Medical Therapy				
Anti-platelets, n (%)	24 (33.8)	9 (36)	15 (32.6)	0.77
Vitamin K antagonist, n (%)	3 (4.22)	2 (8)	1 (2.17)	0.24
New oral anticoagulants, n (%)	4 (5.63)	2 (8)	2 (4.35)	0.52
Beta-blockers, n (%)	23 (32.4)	9 (36)	14 (30.43)	0.63
ACEi, n (%)	29 (40.8)	11 (44)	18 (39.13)	0.68
ARBs, n (%)	11 (15.5)	5 (20)	6 (13.04)	0.44
CCBs, n (%)	10 (14.1)	4 (16)	6 (13.04)	0.73
Statins, n (%)	19 (26.76)	7 (28)	12 (26.1)	0.86
Loop diuretics, n (%)	9 (12.7)	4 (16)	5 (10.87)	0.53
Thiazide diuretics, n (%)	6 (8.5)	3 (12)	3 (6.52)	0.42

Diet therapy, n (%)	4 (5.63)	1 (4)	3 (6.52)	0.65
Oral hypoglycemic agents, n (%)	7 (9.86)	6 (24)	1 (2.17)	0.003*
Metformin, n (%)	6 (85.7)	5 (83.3)	1 (100)	
Insulin secretagoges, n (%)	1 (14.3)	1 (16.7)	0 (0)	
Insulin therapy, n (%)	3 (4.22)	1 (4)	2 (4.4)	0.94

Supp. Table S4: Clinical evaluation and laboratory findings of TakoTsubo patients at 2 year of follow-up.

	Overall N = 65	Hyperglycemics N = 21	Normoglycemics N = 44	p-value
Clinical evaluation				
Systolic blood pressure, mmHg	127.9±28.2	129.8±26.6	128.4±24.1	0.502
Diastolic blood pressure, mmHg	78.6±14.3	78.2±13.8	79.7±15.1	0.135
Heart rate (bpm)	74.1±9.3	75.1±9.9	73.6±10.1	0.231
NYHA class I-II, (%)	63 (96.9)	20 (95.2)	43 (97.7)	0.58
Laboratory data				
Leukocytes, n	9257±483	9482±552	9128±404	0.582
Neutrophyles, n	6499±802	6698±779	6202±821	0.402
Platelets, n X 10^3	225.89±7.19	226.97±7.22	227.69±7.18	0.302
CRP, mg/dl	1.77±0.38	2.45±0.41	1.07±0.35	0.005*
TNF-α, pg/ml	3.56±0.71	4.06±0.81	2.78±0.62	0.005*
BNP, pg/ml	146±35	150±41	143±28	0.156
Glycemia, mmol/L	6.15±1.46	6.91±1.74	5.71±0.78	0.005*
HbA1c, mmol/L	32.72±1.16	33.01±1.39	32.49±1.24	0.128
Creatinine, mg/dL	0.82±0.20	0.83±0.25	0.80±0.19	0.103
eGFR_CKDEPI,	80.23±28.16	84.36±24.97	88.62±22.89	0.084
Norepinephrine,pg/ml	1295.49±212.33	1651.33±260.41	992.33±168.22	0.031*
Medical Therapy	65	21	44	
Anti-platelets, n (%)	20 (30.8)	8 (38.1)	12 (27.3)	0.38
Vitamin K antagonist, n (%)	2 (3.1)	1 (4.76)	1 (2.3)	0.59
New oral anticoagulants, n (%)	5 (7.7)	3 (14.3)	2 (4.5)	0.17
Beta-blockers, n (%)	25 (38.5)	10 (47.6)	15 (34.1)	0.29
ACEi, n (%)	27 (41.5)	10 (47.6)	17 (38.6)	0.49
ARBs, n (%)	10 (15.4)	4 (19)	6 (13.6)	0.56
CCBs, n (%)	8 (12.3)	3 (14.3)	5 (11.4)	0.74
Statins, n (%)	17 (26.2)	6 (28.6)	11 (25)	0.76
Loop diuretics, n (%)	12 (18.5)	7 (33.3)	5 (11.4)	0.032*

Thiazide diuretics, n (%)	4 (6.15)	2 (9.5)	2 (4.5)	0.43
Diet therapy, n (%)	3 (4.6)	1 (4.8)	2 (4.5)	0.97
Oral hypoglycemic agents, n (%)	9 (13.8)	7 (33.3)	2 (4.5)	0.001*
Metformin, n (%)	7 (77.8)	6 (85.7)	1 (50)	
Insulin secretagoges, n (%)	2 (22.2)	1 (14.3)	1 (50)	
Insulin therapy, n (%)	4 (6.15)	2 (9.5)	2 (4.5)	0.43