

Change in lipid profile and risk of new-onset atrial fibrillation in patients with chronic heart failure: A 3-year follow-up observational study in a large Chinese hospital

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Table S1. Clinical parameters at baseline and at the 1-year follow-up

Variable		SR group (n = 213)	AF group (n = 78)	<i>P</i> *-value
NYHA class				
IV	Baseline	102 (47.9%)	57 (73.1%)	<.001
	Follow-up	87 (40.8%)	50 (64.1%)	.0004
	<i>P</i>	.14	.22	
Use of medications				
Statins	Baseline	15 (7%)	6 (7.7%)	.84
	Follow-up	21 (9.8%)	8 (10.2%)	.92
	<i>P</i>	.38	.78	
Fibrates	Baseline	15 (7%)	3 (3.8%)	.31
	Follow-up	12 (5.6%)	6 (7.7%)	.51
	<i>P</i>	.55	.30	
Aspirin	Baseline	174 (81.7%)	66 (84.6%)	.56
	Follow-up	158 (74.1%)	62 (79.4%)	.35
	<i>P</i>	.06	.40	
Clopidogrel	Baseline	78 (36.6%)	30 (38.4%)	.77
	Follow-up	84 (39.4%)	28 (35.9%)	.58
	<i>P</i>	.54	.74	
ACEI	Baseline	180 (84.5%)	72 (92.3%)	.08
	Follow-up	168 (78.8%)	66 (84.6%)	.27
	<i>P</i>	.13	.13	
Furosemide	Baseline	168 (78.9%)	57 (73.07%)	.29
	Follow-up	183 (85.9%)	66 (84.6%)	.77
	<i>P</i>	.06	.07	
Spironolactone	Baseline	168 (78.9%)	62 (79.4%)	.90
	Follow-up	167 (78.4%)	63 (80.7%)	.66
	<i>P</i>	.90	.84	
Nitrates	Baseline	186 (87.3%)	63 (80.8%)	.15
	Follow-up	173 (81.2%)	60 (76.9%)	.41
	<i>P</i>	.08	.55	
Calcium-channel blockers	Baseline	9 (4.2%)	4 (5.1%)	.74
	Follow-up	15 (7%)	6(7.6%)	.84
	<i>P</i>	.20	.51	
Amiodarone	Baseline	6 (3.4%)	3 (3.8%)	.65
	Follow-up	8 (3.7%)	4 (5.1%)	.60
	<i>P</i>	.58	.69	
β-blockers	Baseline	192 (90.1%)	72 (92.3%)	.57
	Follow-up	182 (85.4%)	67 (85.8%)	.92
	<i>P</i>	.13	.19	
TC, mg/dL	Baseline	149.48±43.41	153.57±38.43	.43
	Follow-up	152.24±38.99	129.62±30.14	<.01

	<i>P</i>	.50	<.01	
LDLc, mg/dL	Baseline	93.18±32.06	90.89±32.33	.59
	Follow-up	85.38±32.38	67.53±25.68	<.01
	<i>P</i>	.04	<.01	
HDLc, mg/dL	Baseline	44.48±6.62	47.42±6.14	.20
	Follow-up	39.38±4.93	41.71±5.29	.43
	<i>P</i>	<.01	.01	
TG, mg/dL	Baseline	54.12±11.92	51.26±10.20	.06
	Follow-up	59.86±15.85	54.88±12.55	.06
	<i>P</i>	.11	.65	
TSH, mIU/L	Baseline	2.84±4.5	2.5±2.19	.52
	Follow-up	2.28±3.13	2.63±2.27	.36
	<i>P</i>	.13	.71	
FT3, pmol/L	Baseline	4.48±0.64	4.30±0.87	.06
	Follow-up	4.12±0.93	4.12±0.49	.95
	<i>P</i>	.06	.11	
FT4, pmol/L	Baseline	13.75±3.55	13.05±3.65	.14
	Follow-up	13.08±4.42	12.96±3.02	.80
	<i>P</i>	.08	.86	
Serum creatinine, µmol/L	Baseline	92.98±35.54	103.88±71.48	.08
	Follow-up	96.18±35.54	104.80±40.95	.07
	<i>P</i>	.35	.92	
LVEF, %	Baseline	44.45±10.34	42.16±12.37	.11
	Follow-up	43.80±14.09	41.84±19.68	.34
	<i>P</i>	.58	.90	
LAD, mm	Baseline	42.14±5.28	41.14±5.08	.14
	Follow-up	43.32±7.86	41.76±13.35	.22
	<i>P</i>	.06	.45	
LVEDD, mm	Baseline	65.30±7.84	67.14±12.46	.13
	Follow-up	66.39±9.91	67.38±19.75	.57
	<i>P</i>	.20	.92	

Patients were stratified according to whether new-onset AF was noted at the 1-year follow-up (AF vs. SR group). Within-group differences between baseline and the 1-year follow-up were evaluated using the chi-square test for categorical variables and the paired t-test for continuous variables. Data are given as mean ± standard deviation or number (percentage). The statistical significance is calculated for differences between baseline and 1-year follow-up (within-group comparison, *P*) and between the SR group and AF group (between-group comparison, *P*^{*}).

NYHA class, New York Heart Association class; LVEF, left ventricular ejection fraction; ACEI, angiotensin converting enzyme inhibitor; TC, total cholesterol; LDLc, low-density lipoprotein cholesterol; HDLc, high-density lipoprotein cholesterol; TG, triglycerides; TSH, thyroid stimulating hormone; FT3, serum free triiodothyronine; FT4, serum free thyroxine; LAD, left atrial diameter; LVEDD, left ventricular end-diastolic dimension

Table S2. Characteristics of 188 patients with sinus rhythm at the 1-year follow-up, stratified according to the difference in total cholesterol levels (Δ TC) between baseline and the 1-year follow-up

Variable	Low Δ TC (n = 94) (<9.65 mg/dL)	High Δ TC (n = 94) (>9.65 mg/dL)	<i>P</i> -value
Age, years	72.1 \pm 9.15	70.8 \pm 9.86	.35
Female sex	35 (37.2%)	44 (46.8%)	.18
NYHA class			.30
III	52 (55.3%)	45 (47.8%)	
IV	42 (44.7%)	49 (52.2%)	
Heart failure with reduced LVEF	70 (74.4%)	72 (76.5%)	.73
LVEF, %	44.26 \pm 11.21	42.72 \pm 11.18	.34
Hypertension	70 (74.4%)	62 (65.9%)	.20
Diabetes mellitus	23 (24.4%)	24 (25.5%)	.86
Ischemic heart disease	73 (77.6%)	71 (75.5%)	.73
Cerebrovascular disease	18 (19.1%)	14 (14.8%)	.43
Smoking	17 (18%)	19 (20.2%)	.71
Alcohol consumption	5 (5.3%)	7 (7.4%)	.55
Use of medications			
Statins	9 (9.5%)	8 (8.5%)	.79
Fibrates	4 (4.2%)	6 (6.3%)	.51
Aspirin	65 (69.1%)	71 (75.5%)	.32
Clopidogrel	32 (34%)	37 (39.3%)	.44
ACEI	73 (77.6%)	75 (79.7%)	.72
Furosemide	91 (96.8%)	89 (94.6%)	.46
Spironolactone	72 (76.5%)	78 (82.9%)	.27
Nitrates	74 (78.7%)	78 (82.9%)	.45
Calcium-channel blockers	5 (5.3%)	6 (6.3%)	.75
Amiodarone	4 (4.2%)	3 (3.1%)	.70
β -blockers	80 (85.1%)	83 (88.2%)	.52

Differences (Δ) were calculated by subtracting the values noted at the 1-year follow-up from those noted at baseline. Data are given as mean \pm standard deviation or number (percentage).

TC, total cholesterol; NYHA class, New York Heart Association class; LVEF, left ventricular ejection fraction; ACEI, angiotensin converting enzyme inhibitor

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Table S3. Characteristics of 188 patients with sinus rhythm at the 1-year follow-up, stratified according to the difference in low-density lipoprotein cholesterol levels (Δ LDLc) between baseline and the 1-year follow-up

Variable	Low Δ LDLc (n = 94) (<9.73 mg/dL)	High Δ LDLc (n = 94) (>9.73 mg/dL)	<i>P</i> -value
Age, years	72.2 \pm 9.12	70.7 \pm 9.36	.26
Female sex	37 (39.3%)	42 (44.6%)	.46
NYHA class			.66
III	50 (53.1%)	47 (50%)	
IV	44 (46.9%)	47 (50%)	
Heart failure with reduced LVEF	69 (73.4%)	73 (77.6%)	.49
LVEF, %	43.95 \pm 10.76	42.97 \pm 10.43	.52
Hypertension	68 (72.3%)	64 (68%)	.52
Diabetes mellitus	22 (23.4%)	25 (26.5%)	.61
Ischemic heart disease	74 (78.7%)	70 (74.4%)	.49
Cerebrovascular disease	17 (18%)	15 (15.9%)	.69
Smoking	17 (18%)	19 (20.2%)	.71
Alcohol consumption	5 (5.3%)	7 (7.4%)	.55
Use of medications			
Statins	8 (8.5%)	9 (9.5%)	.79
Fibrates	4 (4.2%)	6 (6.3%)	.51
Aspirin	66 (70.2%)	70 (74.4%)	.51
Clopidogrel	34 (36.1%)	35 (37.2%)	.88
ACEI	72 (76.5%)	76 (80.8%)	.47
Furosemide	91 (96.8%)	89 (94.6%)	.46
Spironolactone	73 (77.6%)	77 (81.9%)	.46
Nitrates	75 (79.7%)	77 (81.9%)	.71
Calcium-channel blockers	6 (6.3%)	5 (5.3%)	.75
Amiodarone	4 (4.2%)	3 (3.1%)	.70
β -blockers	81 (86.1%)	82 (87.2%)	.83

Differences (Δ) were calculated by subtracting the values noted at the 1-year follow-up from those noted at baseline. Data are given as mean \pm standard deviation or number (percentage).

LDLc, low-density lipoprotein cholesterol; NYHA class, New York Heart Association class; LVEF, left ventricular ejection fraction; ACEI, angiotensin converting enzyme inhibitor

Table S4. Characteristics of 188 patients with sinus rhythm at the 1-year follow-up, stratified according to the difference in high-density lipoprotein cholesterol levels (Δ HDLc) between baseline and the 1-year follow-up

Variable	Low Δ HDLc (n = 94) (<3.72 mg/dL)	High Δ HDLc (n = 94) (>3.72 mg/dL)	<i>P</i> -value
Age, years	71.7 \pm 9.03	71 \pm 9.12	.59
Female sex	38 (40.4%)	41 (43.6%)	.65
NYHA class			.88
III	48 (51%)	49 (52.1%)	
IV	46 (48.9%)	45 (47.8%)	
Heart failure with reduced LVEF	68 (72.3%)	74 (78.7%)	.30
LVEF, %	44.12 \pm 10.13	43.65 \pm 10.72	.75
Hypertension	67 (71.2%)	65 (69.1%)	.74
Diabetes mellitus	23 (24.4%)	24 (25.5%)	.86
Ischemic heart disease	69 (73.4%)	75 (79.7%)	.30
Cerebrovascular disease	15 (15.9%)	17 (18%)	.43
Smoking	19 (20%)	17 (18%)	.71
Alcohol consumption	5 (5.3%)	7 (7.4%)	.55
Use of medications			
Statins	9 (9.5%)	8 (8.5%)	.80
Fibrates	4 (4.2%)	6 (6.3%)	.51
Aspirin	67 (71.2%)	69 (73.4%)	.74
Clopidogrel	33 (35.1%)	36 (38.2%)	.65
ACEI	75 (79.7%)	73 (77.6%)	.72
Furosemide	92 (97.8%)	88 (93.6%)	.14
Spironolactone	74 (78.7%)	76 (80.8%)	.71
Nitrates	74 (78.7%)	78 (82.9%)	.45
Calcium-channel blockers	6 (6.3%)	5 (5.3%)	.75
Amiodarone	4 (4.2%)	3 (3.1%)	.70
β -blockers	83 (88.2%)	80 (85.1%)	.51

Differences (Δ) were calculated by subtracting the values noted at the 1-year follow-up from those noted at baseline. Data are given as mean \pm standard deviation or number (percentage).

Δ HDLc, high-density lipoprotein cholesterol; NYHA class, New York Heart Association class; LVEF, left ventricular ejection fraction; ACEI, angiotensin converting enzyme inhibitor