

**Table S1** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at resting HR pre- and post-RFCA

Items	Pre-RFCA				Post-RFCA			
	Left free-wall (n=18)	Septum (n=7) <sup>a</sup>	Right free-wall (n=7) <sup>a</sup>	P	Left free-wall (n=18)	Septum (n=7) <sup>a</sup>	Right free-wall (n=7) <sup>a</sup>	P
Delta, ms	48.0±9.5	43.7±6.3	48.1±9.2	0.52	–	–	–	–
QRSd, ms	128.8±16.3	128.4±16.6	135.6±10.5	0.58	81.6±10.5	87.1±10.1	80.6±8.6	0.39
PSD, ms	54.1±28.8	63.8±26.0	41.7±10.6	0.28	44.7±10.3	50.3±15.0	45.6±20.3	0.66
LVEF, %	61.8±7.5	57.9±10.5	58.4±3.9	0.41	62.2±6.0	59.9±8.9	60.7±5.1	0.69
GLS, %	–19.3±2.9	–18.7±1.9	–16.8±1.6	0.10	–19.4±2.3	–18.7±2.6	–18.0±1.3	0.36
GWI, mmHg%	1837.4±359.4	1760.6±280.8	1668.3±342.9	0.53	1843.3±235.0	1767.7±421.7	1638.4±231.3	0.28
GCW, mmHg%	2045.2±307.8	2056.3±380.5	1960.9±295.9	0.81	2084.8±237.0	2047.7±429.0	1844.7±215.7	0.17
GWW, mmHg%	148.5±55.3	215.7±100.6	158.3±42.7	0.08	93.7±38.4	111.9±60.8	70.3±21.1	0.18
GWE, %	92.6±2.4	88.1±5.9*	91.9±2.3	0.02	95.1±1.5	93.9±2.0	95.4±1.1	0.14
HR, bpm	76.3±10.3	70.4±12.7	70.3±9.3	0.30	74.8±12.6	74.6±14.9	71.4±11.5	0.83
SBP, mmHg	119.4±11.2	129.6±14.7	118.0±15.7	0.17	117.1±9.1	124.4±13.3	113.9±12.0	0.17
DBP, mmHg	73.3±7.9	75.7±6.1	75.4±7.1	0.82	72.8±6.4	73.1±4.5	74.0±8.6	0.91
Age, years old	39.3±14.3	50.1±22.8	36.1±14.2	0.24	39.3±14.3	50.1±22.8	36.1±14.2	0.24
Percentage of female (%)	33.3	57.1	42.9	0.54	–	–	–	–
Height, cm	164.7±10.0	159.3±12.5	166.6±7.1	0.36	164.7±10.0	159.3±12.5	166.6±7.1	0.36
Weight, kg	59.3±10.1	58.7±9.3	61.1±9.3	0.88	59.3±10.1	58.7±9.3	61.1±9.3	0.88

Data are expressed as mean ± standard deviation (SD). <sup>a</sup>, 1 patient was identified as intermittent ventricular pre-excitation. \* P<0.01, significantly different compared with left free-wall AVAP group. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S2** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at HR of 100 bpm pre- and post-RFCA

Items	Pre-RFCA				Post-RFCA			
	Left free-wall (n=14) <sup>a</sup>	Septum (n=7) <sup>b</sup>	Right free-wall (n=7) <sup>b</sup>	P	Left free-wall (n=14) <sup>a</sup>	Septum (n=7) <sup>b</sup>	Right free-wall (n=7) <sup>b</sup>	P
Delta, ms	51.7±10.5	49.7±8.6	49.3±10.7	0.84	–	–	–	–
QRSd, ms	135.7±26.2	138.9±19.0	136.1±10.4	0.95	80.8±10.2	85.4±14.3	83.6±6.7	0.62
PSD, ms	60.3±20.5	64.9±25.6	39.0±5.7	0.03*	52.8±14.4	54.4±14.6	41.8±6.3	0.14
LVEF, %	55.9±7.6	50.1±7.1	54.0±5.8	0.22	57.3±5.3	51.3±4.9	56.3±6.8	0.08
GLS, %	–17.1±2.3	–15.8±2.6	–15.7±2.6	0.34	–17.5±2.3	–16.2±1.9	–15.1±1.5	0.05
GWI, mmHg%	1947.1±502.0	1710.6±419.3	1676.9±361.0	0.34	1930.4±473.1	1878.3±342.5	1603.6±238.5	0.21
GCW, mmHg%	2296.0±438.2	2213.0±487.5	2010.0±488.4	0.42	2259.0±396.8	2293.0±287.7	1888.7±355.4	0.07
GWW, mmHg%	302.4±127.6	285.9±133.0	214.3±83.8	0.29	213.0±121.5	190.4±61.9	135.1±30.0	0.22
GWE, %	86.6±5.8	85.1±5.5	89.4±3.0	0.30	90.4±4.1	90.9±3.1	92.3±1.1	0.47
SBP, mmHg	139.5±15.0	145.7±16.5	130.9±29.7	0.38	137.3±12.5	146.7±16.5	132.1±27.6	0.32
DBP, mmHg	88.9±10.1	90.0±13.8	84.7±22.6	0.77	89.4±11.4	88.9±13.0	86.4±24.9	0.92
Age, years old	41.4±14.5	45.9±22.8	37.3±13.2	0.63	41.4±14.5	45.9±22.8	37.3±13.2	0.63
Percentage of female (%)	28.6	57.1	42.9	0.43	–	–	–	–
Height, cm	163.97±9.3	160.6±11.8	165.6±5.9	0.59	163.97±9.3	160.6±11.8	165.6±5.9	0.59
Weight, kg	59.9±10.0	59.9±7.4	61.9±9.8	0.89	59.9±10.0	59.9±7.4	61.9±9.8	0.89

Data are expressed as mean ± SD. <sup>a</sup>, 4 patients experienced delta wave disappearance or Wenckebach's phenomenon at pacing heart rates; <sup>b</sup>, 1 patient experienced delta wave disappearance or Wenckebach's phenomenon at pacing heart rates. \*P<0.05. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S3** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at HR of 120 bpm pre- and post-RFCA

Items	Pre-RFCA				Post-RFCA			
	Left free-wall (n=14) <sup>a</sup>	Septum (n=7) <sup>b</sup>	Right free-wall (n=7) <sup>b</sup>	P	Left free-wall (n=14) <sup>a</sup>	Septum (n=7) <sup>b</sup>	Right free-wall (n=7) <sup>b</sup>	P
Delta, ms	54.0±11.8	55.1±9.3	50.9±7.4	0.71	–	–	–	–
QRSd, ms	143.9±26.9	143.7±19.7	142.1±21.0	0.98	80.4±10.6	83.7±15.4	81.4±8.5	0.82
PSD, ms	57.4±19.7	61.2±21.9	62.9±13.8	0.80	44.2±12.7	56.6±17.6	46.7±14.2	0.19
LVEF, %	54.7±6.5	48.0±6.4	48.3±7.0	0.04*	54.9±8.3	51.0±7.2	52.6±3.1	0.48
GLS, %	–16.0±2.2	–14.8±2.4	–13.2±2.4	0.04*	–17.0±2.2	–15.4±1.9	–14.3±1.9	0.02*
GWI, mmHg%	1720.8±490.3	1422.9±437.1	1329.9±398.7	0.14	1738.4±481.8	1484.9±325.1	1204.3±311.5	0.03*
GCW, mmHg%	2170.1±295.6	2171.9±435.9	1938.3±495.1	0.40	2160.3±379.5	2066.4±312.6	1802.3±488.1	0.15
GWW, mmHg%	332.1±121.3	369.0±153.2	261.7±98.0	0.27	181.0±80.9	199.4±89.4	162.4±43.2	0.66
GWE, %	84.6±4.5	83.7±6.7	87.3±4.2	0.38	91.0±3.1	88.9±5.7	90.4±2.4	0.47
SBP, mmHg	138.3±13.3	143.4±16.5	132.6±28.4	0.56	136.2±12.5	144.1±15.1	130.1±27.7	0.35
DBP, mmHg	91.2±11.0	93.6±19.6	90.9±25.8	0.94	91.6±10.3	90.7±14.0	91.3±26.0	0.99
Age, years old	41.4±14.5	45.9±22.8	37.3±13.2	0.63	41.4±14.5	45.9±22.8	37.3±13.2	0.63
Percentage of female (%)	28.6	57.1	42.9	0.43	–	–	–	–
Height, cm	163.97±9.3	160.6±11.8	165.6±5.9	0.59	163.97±9.3	160.6±11.8	165.6±5.9	0.59
Weight, kg	59.9±10.0	59.9±7.4	61.9±9.8	0.89	59.9±10.0	59.9±7.4	61.9±9.8	0.89

Data are expressed as mean ± SD. <sup>a</sup>, 4 patients experienced delta wave disappearance or Wenckebach's phenomenon at pacing heart rates; <sup>b</sup>, 1 patient experienced delta wave disappearance or Wenckebach's phenomenon at pacing heart rates. \*P<0.05. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S4** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at resting HR

Items	Asymptomatic (n=5) <sup>a</sup>				Symptomatic (n=27)				P <sub>δ1 vs. δ2</sub>
	Pre-RFCA	Post-RFCA	δ1	P	Pre-RFCA	Post-RFCA	δ2	P	
QRSd, ms	140.4±11.8	78.0±5.7	-62.4±14.2	0.001*	128.3±15.1	83.4±10.5	-44.9±16.6	<0.001*	0.03*
PSD, ms	61.9±53.0	40.6±4.3	-21.4±54.3	0.42	52.0±18.5	47.1±14.6	-4.8±20.1	0.22	0.22
LVEF, %	54.8±5.0	59.4±6.5	4.6±8.1	0.27	61.2±7.7	61.7±6.4	0.6±4.6	0.53	0.12
GLS, %	-17.7±1.5	-18.8±2.1	-1.0±2.9	0.48	-18.8±2.7	-18.9±2.3	-0.2±1.9	0.61	0.40
GWI, mmHg%	1725.8±332.0	1901.4±245.8	175.6±292.5	0.25	1794.3±343.2	1759.9±291.8	-34.4±193.2	0.36	0.04*
GCW, mmHg%	1957.4±173.3	2154.6±185.7	197.2±313.5	0.23	2042.5±333.8	2000.0±303.5	-42.5±197.8	0.27	0.03*
GWW, mmHg%	169.0±22.7	113.6±30.0	-55.4±35.5	0.02*	164.7±74.6	88.7±43.8	-76.0±53.2	<0.001*	0.41
GWE, %	90.8±1.3	94.4±1.1	3.6±2.3	0.02*	91.6±4.1	95.0±1.7	3.4±3.1	<0.001*	0.87
HR, bpm	77.4±12.0	76.8±14.5	-0.6±4.2	0.76	73.0±10.6	73.5±12.4	0.48±8.6	0.77	0.78
SBP, mmHg	121.4±8.0	122.2±10.5	0.8±4.9	0.73	121.3±14.2	117.2±11.1	-4.1±5.6	0.001*	0.07
DBP, mmHg	71.4±7.5	72.8±5.8	1.4±2.6	0.29	74.8±10.4	73.2±6.6	-1.6±7.1	0.24	0.36
Age, years old	37.0±14.4	37.0±14.4	-	-	41.7±17.2	41.7±17.2	-	-	0.56 <sup>#</sup>
Percentage of female (%)	20	20	-	-	48.1	48.1	-	-	0.27 <sup>#</sup>
Height, cm	170.7±9.1	170.7±9.1	-	-	162.7±9.9	162.7±9.9	-	-	0.10 <sup>#</sup>
Weight, kg	57.8±6.0	57.8±6.0	-	-	59.9±10.1	59.9±10.1	-	-	0.65 <sup>#</sup>

Data are expressed as mean ± SD. δ1 and δ2 are the differences between post-RFCA values and pre-RFCA values in asymptomatic and symptomatic patients, respectively; <sup>a</sup>, 2 patients were identified as intermittent ventricular pre-excitation. <sup>#</sup>, Comparison of parameters in asymptomatic and symptomatic patients pre-RFCA. \*P<0.05. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S5** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at HR of 100 bpm

Items	Asymptomatic (n=6) <sup>a</sup>				Symptomatic (n=22) <sup>b</sup>				P <sub>δ1 vs. δ2</sub>
	Pre-RFCA	Post-RFCA	δ1	P	Pre-RFCA	Post-RFCA	δ2	P	
QRSd, ms	149.3±27.9	76.3±9.8	-73.0±29.2	0.002*	133.1±17.8	84.4±10.2	-48.8±19.2	<0.001*	0.02*
PSD, ms	70.4±26.5	52.9±20.2	-17.5±24.2	0.13	52.2±18.7	49.8±11.6	-2.4±14.4	0.43	0.06
LVEF, %	55.0±8.4	57.0±3.7	2.0±6.2	0.46	53.7±7.1	55.1±6.4	1.4±3.4	0.06	0.75
GLS, %	-16.2±2.4	-16.7±1.6	-0.5±2.2	0.60	-16.5±2.5	-16.6±2.4	-0.1±1.9	0.87	0.64
GWI, mmHg%	1732.3±291.4	1777.7±367.3	45.3±253.4	0.68	1844.5±492.0	1851.5±423.7	7.0±347.9	0.92	0.80
GCW, mmHg%	2238.3±323.4	2172.2±297.8	-66.2±381.7	0.68	2194.3±497.8	2175.7±415.6	-18.6±307.5	0.77	0.75
GWW, mmHg%	372.2±144.4	241.0±151.9	-131.2±139.9	0.07	250.1±102.9	173.4±73.0	-76.7±67.2	<0.001*	0.18
GWE, %	82.8±6.6	89.3±4.7	6.5±4.1	0.01*	88.1±4.3	91.4±2.9	3.3±3.1	<0.001*	0.05
SBP, mmHg	134.2±8.2	135.2±13.7	1.0±6.3	0.71	140.2±21.9	139.2±19.5	-1.0±6.3	0.48	0.50
DBP, mmHg	83.7±7.8	85.0±11.9	1.3±6.7	0.64	89.4±15.7	89.5±16.4	0.1±6.6	0.92	0.69
Age, years old	36.3±13.0	36.3±13.0	-	-	42.9±17.1	42.9±17.1	-	-	0.39 <sup>#</sup>
Percentage of female (%)	16.7	16.7	-	-	45.5	45.5	-	-	0.20 <sup>#</sup>
Height, cm	168.7±9.4	168.7±9.4	-	-	162.1±8.8	162.1±8.8	-	-	0.12 <sup>#</sup>
Weight, kg	56.8±5.9	56.8±5.9	-	-	61.4±9.6	61.4±9.6	-	-	0.28 <sup>#</sup>

Data are expressed as mean ± SD. δ1 and δ2 are the differences between post-RFCA values and pre-RFCA values in asymptomatic and symptomatic patients, respectively; <sup>a</sup>, 1 patient experienced delta wave disappearance at pacing heart rates.; <sup>b</sup>, 5 patients experienced delta wave disappearance or Wenckebach's phenomenon during pacing heart rates. <sup>#</sup>, Comparison of parameters in asymptomatic and symptomatic patients pre-RFCA. \*P<0.05. QRSd, QRS wave duration; PSD, The standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S6** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation at HR of 120 bpm

Items	Asymptomatic (n=6) <sup>a</sup>				Symptomatic (n=22) <sup>b</sup>				P <sub>δ1 vs. δ2</sub>
	Pre-RFCA	Post-RFCA	δ1	P	Pre-RFCA	Post-RFCA	δ2	P	
QRSd, ms	158.0±25.7	73.3±11.1	-84.7±25.5	<0.001*	139.4±21.2	83.7±10.3	-55.7±21.6	<0.001*	0.009*
PSD, ms	61.5±22.2	43.9±16.9	-17.6±25.7	0.15	59.2±17.9	49.0±14.4	-10.2±20.8	0.03*	0.46
LVEF, %	53.0±7.6	50.2±10.1	-2.8±7.5	0.39	51.0±7.2	54.2±5.9	3.2±4.9	0.006*	0.02*
GLS, %	-15.9±1.6	-16.0±1.9	-0.1±2.3	0.92	-14.7±2.7	-15.9±2.5	-1.2±2.9	0.01*	0.26
GWI, mmHg%	1758.3±342.4	1538.8±377.1	-219.5±182.3	0.03*	1491.4±495.9	1542.2±482.3	50.9±305.8	0.44	0.05
GCW, mmHg%	2259.8±186.0	1975.3±181.0	-284.5±210.7	0.02*	2072.4±419.3	2067.0±439.8	-5.5±308.6	0.93	0.04*
GWW, mmHg%	373.7±157.1	174.2±97.7	-199.5±150.2	0.02*	310.1±117.5	182.8±69.4	-127.3±80.9	<0.001*	0.12
GWE, %	84.3±5.7	90.7±4.1	6.3±5.2	0.03*	85.2±5.0	90.2±3.7	5.0±3.5	<0.001*	0.46
SBP, mmHg	136.2±12.4	131.0±12.6	-5.2±5.2	0.06	138.7±20.0	138.2±19.2	-0.5±8.4	0.80	0.20
DBP, mmHg	89.0±10.9	87.0±12.6	-2.0±4.0	0.27	92.5±18.6	92.5±16.5	0.1±5.9	0.97	0.43
Age, years old	36.3±13.0	36.3±13.0	-	-	42.9±17.1	42.9±17.1	-	-	0.39 <sup>#</sup>
Percentage of female (%)	16.7	16.7	-	-	45.5	45.5	-	-	0.20 <sup>#</sup>
Height, cm	168.7±9.4	168.7±9.4	-	-	162.1±8.8	162.1±8.8	-	-	0.12 <sup>#</sup>
Weight, kg	56.8±5.9	56.8±5.9	-	-	61.4±9.6	61.4±9.6	-	-	0.28 <sup>#</sup>

Data are expressed as mean ± SD. δ1 and δ2 are the differences between post-RFCA values and pre-RFCA values in asymptomatic and symptomatic patients, respectively; <sup>a</sup>, 1 patient experienced delta wave disappearance at pacing heart rates.; <sup>b</sup>, 5 patients experienced delta wave disappearance or Wenckebach's phenomenon during pacing heart rates. <sup>#</sup>, Comparison of parameters in asymptomatic and symptomatic patients pre-RFCA. \*P<0.05. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S7** Electrocardiographic and echocardiographic parameters in patients with ventricular pre-excitation and healthy control at resting heart rate

Items	Pre-RFCA (n=32) <sup>#</sup>	Post-RFCA (n=32) <sup>#</sup>	Control (n=18)	P <sup>a</sup>	P <sup>b</sup>	P <sup>c</sup>
QRSd, ms	130.2±15.1	82.6±10.0	84.3±11.0	<0.001*	<0.001*	0.63
PSD, ms	53.5±25.8	46.1±13.6	48.6±10.2	0.11	0.37	0.66
LVEF, %	60.2±7.6	61.4±6.4	62.1±5.2	0.48	0.34	0.73
GLS, %	-18.6±2.6	-18.9±2.3	-19.4±1.7	0.57	0.22	0.44
GWI, mmHg%	1783.6±337.1	1782.0±286.2	1838.4±324.1	0.98	0.55	0.54
GCW, mmHg%	2029.2±313.5	2024.2±291.5	2128.3±330.9	0.94	0.27	0.25
GWW, mmHg%	165.3±68.8	92.6±42.5	94.8±33.4	<0.001*	<0.001*	0.88
GWE, %	91.5±3.8	94.9±1.6	94.8±1.6	<0.001*	<0.001*	0.90
HR, bpm	73.7±10.7	74.0±12.5	73.2±9.7	0.91	0.86	0.79
SBP, mmHg	121.3±13.3	118.0±11.0	118.5±11.6	0.27	0.42	0.88
DBP, mmHg	74.3±9.9	73.1±6.4	74.4±8.7	0.58	0.94	0.59
Age, years old	41.0±16.7	41.0±16.7	42.5±15.5	-	0.75	0.75
Percentage of female (%)	40.6	40.6	50.0	-	0.76	0.76
Height, cm	163.9±10.1	163.9±10.1	162.9±8.8	-	0.73	0.73
Weight, kg	59.6±9.5	59.6±9.5	62.3±8.5	-	0.31	0.31

Data are expressed as mean ± SD. <sup>a</sup>, pre-RFCA vs post-RFCA; <sup>b</sup>, Control vs pre-RFCA; <sup>c</sup>, Control vs post-RFCA. <sup>#</sup>, 2 patients were identified as intermittent ventricular pre-excitation. \*P<0.05. QRSd, QRS wave duration; PSD, the standard deviation of the time to the peak systolic strain of 17 segments; LVEF, left ventricular ejection fraction; GLS, global longitudinal strain; GWI, global work index; GCW, global constructive work; GWW, global waste work; GWE, global work efficiency; HR, heart rate; SBP, systolic blood pressure; DBP, diastolic blood pressure; RFCA, radiofrequency catheter ablation.

**Table S8** Comparison of the difference on the amount of change in GWW according to HR increase in the ventricular pre-excitation patients ( $\bar{x}\pm$ SD, n=26)

	Resting HR (73±9 bpm)	HR=100 bpm	HR=120 bpm	δ1	δ2	P <sup>a</sup>
Pre-RFCA (mmHg%)	166.7±74.2	279.6±121.9	330.6±127.6	101.5±114.9	47.9±59.1	0.05
Post-RFCA (mmHg%)	90.4±45.9	190.4±99.0	186.5±74.0	100.1±90.3	-4.0±65.7	0.001*
P <sup>b</sup>	-	-	-	0.94	<0.001*	-

δ1 = GWW<sub>100 bpm</sub> - GWW<sub>resting HR</sub>; δ2 = GWW<sub>120 bpm</sub> - GWW<sub>100 bpm</sub>; <sup>a</sup>, δ1 vs. δ2; <sup>b</sup>, pre-RFCA vs. post-RFCA. \*P<0.05. GWW, global waste work; HR, heart rate; RFCA, radiofrequency catheter ablation.

**Table S9** Comparison of the difference on the amount of change in GWE according to HR increase in the ventricular pre-excitation patients. ( $\bar{x}\pm$ SD, n=26)

	Resting HR (73±9 bpm)	HR=100 bpm	HR=120 bpm	δ1	δ2	P <sup>a</sup>
Pre-RFCA (%)	91.5±4.1	86.9±5.4	84.7±5.1	-4.7±4.7	-2.2±3.0	0.05
Post-RFCA (%)	95.0±1.7	90.9±3.4	90.2±3.8	-4.2±3.2	-0.7±3.1	0.004*
P <sup>b</sup>	-	-	-	0.44	0.11	-

δ1 = GWE<sub>100 bpm</sub> - GWE<sub>resting HR</sub>; δ2 = GWE<sub>120 bpm</sub> - GWE<sub>100 bpm</sub>; <sup>a</sup>, δ1 vs. δ2; <sup>b</sup>, pre-RFCA vs. post-RFCA. \*P<0.05. GWE, global work efficiency; HR, heart rate; RFCA, radiofrequency catheter ablation.