

Supplementary

Table S1 3DCT parameters

3DCT parameters	Significant MR (n=16)	No significant MR (n=18)	P value
LV wall thickness			
Basal			
Anterior, (mm)	13 [10–16]	13 [10–15]	0.89
Anteroseptal, (mm)	19 [17–20]	19 [18–20]	0.59
Inferoseptum, (mm)	14 [12–19]	14 [11–16]	0.76
Inferior, (mm)	11 [9–13]	11 [10–14]	0.91
Inferolateral, (mm)	10 [9–12]	11 [9–13]	0.49
Anterolateral, (mm)	11 [10–12]	12 [11–14]	0.14
Mid			
Anterior, (mm)	10 [9–12]	11 [10–13]	0.23
Anteroseptal, (mm)	14 [11–21]	12 [16–18]	0.50
Inferoseptum, (mm)	16 [12–17]	17 [13–20]	0.47
Inferior, (mm)	12 [10–13]	13 [9–15]	0.53
Inferolateral, (mm)	10 [10–12]	11 [9–12]	0.36
Anterolateral, (mm)	10 [9–11]	11 [9–13]	0.23
Apical			
Anterior, (mm)	11 [8–11]	10 [9–13]	0.61
Septal, (mm)	10 [9–12]	12 [9–14]	0.22
Inferior, (mm)	10 [9–11]	10 [8–11]	0.65
Lateral, (mm)	10 [9–11]	10 [8–11]	0.81
Apex, (mm)	7 [6–9]	7 [6–8]	0.85
Number of PM heads			
Anterolateral	1.7 ± 0.5	1.7 ± 0.5	0.73
Posteromedial	1.9 ± 0.5	1.9 ± 0.5	0.68
Distal-most location of PMs in LV			
Mid-one-third, (%)	3 (19%)	5 (28%)	0.54
Apical one-third, (%)	13 (81%)	13 (72%)	
Predicted volume of myocardial resection, (mL)	7.3 ± 4.0	7.2 ± 3.4	0.97

Values are expressed as means ± standard deviation, medians (interquartile range), or numbers (%). 3DCT, three-dimensional computed tomography; LV, left ventricle; MR, mitral regurgitation; PM, papillary muscle.

Table S2 Multivariate linear regression of determinants associated with MR grade

Variables	Adjusted R ² =0.65	
	β	P value
Tenting area, cm ²	1.48	<0.001
LA volume index, mL/m ²	0.006	0.28
E wave velocity, cm/s	0.003	0.57

β, standard regression coefficient; LA, left atrial.

Table S3 Change of mitral configuration after septal myectomy with or without chordal cutting procedure in all patients (n=34)

All patients (n=34)	With chordal cutting	Without chordal cutting	P value
	(n=20)	(n=14)	
Pre-operative TTE parameters			
AML length, (mm)	31 [29–34]	28 [27–31]	0.04
PML length, (mm)	21 [19–23]	20 [18–21]	0.13
Tenting area, (cm ²)	2.1 [1.8–2.6]	1.7 [1.4–1.8]	<0.001
Aorto-mitral angle, (°)	128 [122–131]	125 [116–130]	0.36
C-Sept distance, (mm)	20 [18–21]	20 [18–22]	0.62
AML-ratio	0.47 [0.44–0.50]	0.52 [0.50–0.57]	<0.001
MR severity, (%)			0.09
No	2 (10%)	3 (21%)	
Mild	5 (25%)	8 (57%)	
Moderate	6 (30%)	2 (14%)	
Severe	7 (35%)	1 (7%)	
SAM severity, (%)			0.004
No	0	0	
Mild	0	0	
Moderate	7 (35%)	12 (86%)	
Severe	13 (65%)	2 (14%)	
Systolic BP, (mmHg)	127 [117–142]	125 [120–151]	0.63
Diastolic BP, (mmHg)	71 [65–76]	76 [73–82]	0.03
Follow-up TTE parameters			
AML length, (mm)	30 [28–32]	29 [27–31]	0.43
PML length, (mm)	22 [19–24]	19 [18–22]	0.07
Tenting area, (cm ²)	1.4 [1.2–1.6]	1.5 [1.3–1.9]	0.33
Aorto-mitral angle, (°)	127 [119–133]	131 [125–135]	0.34
C-Sept distance, (mm)	25 [23–27]	27 [22–30]	0.32
AML-ratio	0.60 [0.55–0.65]	0.51 [0.48–0.54]	<0.001
MR severity, (%)			0.16
No	12 (60%)	11 (79%)	
Mild	8 (40%)	2 (14%)	
Moderate	0	1 (7%)	
Severe	0	0	
SAM severity, (%)			0.23
No	20 (100%)	13 (93%)	
Mild	0	0	
Moderate	0	1 (7%)	
Severe	0	0	
Systolic BP, (mmHg)	131 [107–145]	123 [117–142]	0.97
Diastolic BP, (mmHg)	71 [65–76]	76 [73–82]	0.40

AML, anterior mitral leaflet; PML, posterior mitral leaflet; MR, mitral regurgitation; SAM, systolic anterior motion; BP, blood pressure; TTE, transthoracic echocardiogram.

Table S4 Change of mitral configuration after septal myectomy with or without chordal cutting procedure in those without significant MR (n=18)

Patients without significant MR (n=18)	With chordal cutting	Without chordal cutting	P value
	(n=7)	(n=11)	
Pre-operative TTE parameters			
AML length, (mm)	29 [27–33]	28 [27–31]	0.58
PML length, (mm)	22 [20–24]	20 [18–23]	0.36
Tenting area, (cm ²)	1.7 [1.4–2.0]	1.5 [1.3–1.7]	0.18
Aorto-mitral angle, (°)	130 [121–133]	123 [116–130]	0.32
C-Sept distance, (mm)	19 [18–20]	20 [18–22]	0.49
AML-ratio	0.46 [0.44–0.54]	0.52 [0.50–0.56]	0.13
Severity of MR, (%)			0.95
No	2 (29%)	3 (27%)	
Mild	5 (71%)	8 (73%)	
Moderate	0	0	
Severe	0	0	
SAM severity, (%)			0.10
No	0	0	
Mild	0	0	
Moderate	3 (43%)	9 (82%)	
Severe	4 (57%)	4 (18%)	
Systolic BP, (mmHg)	122 [117–130]	125 [121–163]	0.24
Diastolic BP, (mmHg)	70 [69–76]	78 [72–86]	0.12
Follow-up TTE parameters			
AML length, (mm)	28 [27–33]	28 [26–33]	0.68
PML length, (mm)	22 [21–24]	20 [18–22]	0.19
Tenting area, (cm ²)	1.2 [1.0–1.6]	1.5 [1.1–1.8]	0.32
Aorto-mitral angle, (°)	131 [122–138]	128 [121–135]	0.72
C-Sept distance, (mm)	26 [26–29]	26 [23–32]	0.93
AML-ratio	0.61 [0.55–0.65]	0.50 [0.48–0.54]	0.005
MR severity, (%)			0.62
No	5 (71%)	9 (82%)	
Mild	2 (29%)	2 (18%)	
Moderate	0	0	
Severe	0	0	
SAM severity, (%)			0.35
No	7 (100%)	11 (100%)	
Mild	0	0	
Moderate	0	0	
Severe	0	0	
Systolic BP, (mmHg)	125 [119–146]	131 [109–147]	0.96
Diastolic BP, (mmHg)	78 [76–87]	74 [72–78]	0.06

AML, anterior mitral leaflet; MR, mitral regurgitation; PML, posterior mitral leaflet; SAM, systolic anterior motion; BP, blood pressure; TTE, transthoracic echocardiogram