

## Characterizing Hypokinetic Hypertrophic Cardiomyopathy

*Kuperstein, Rafael; Freimark, Dov; Hirsch, Shirly; Arad, Michael  
Sheba Medical Center, Tel Hashomer, Israel*

Purpose: To characterize patients with hypertrophic cardiomyopathy(HCM) with hypokinetic left ventricles(LVEF<50%).

Methods: Two hundred and ten patients with HCM from our tertiary HCM clinic database were analyzed. One hundred and ninety four patients had LV ejection fraction  $\geq 50\%$ (normal) and were compared to the remaining 16 patients who had LVEF<50% (hypokinetic).

In subgroup analysis we found that 9 of the hypokinetic patients had dilated LV cavities ( LV end-diastolic dimension>55 mm) and we further compared them with the 7 hypokinetic patients without LV dilation.

Results:

Table 1: Comparison between HCM patients with normal and hypokynetic LV (n=210)

	Age onset	Family History(%)	LVEF(%)	Septal thickness(mm)	LVOT Obstruction(%)	Severe Diastolic Dysfunction(%)	Severe Ventricular arrhythmia(%)	NYHA Class	Death(%)
Hypokinetic (n=16)	28±14	15(94%)	33±7	15±3	2(12.5%)	12(75%)	4(25%)	2.9±0.7	6(37.5%)
Normal(n=194)	38±18	89(46%)	63±5	18±5	97(50%)	25(13%)	7(3.6%)	1.9±0.8	5(2.5%)
p	0.03*	0.0004^	<0.0001*	0.02*	0.0004^	0.0001^	0.0006^	<0.0001*	0.003^

Table 2: Comparison between hypokinetic HCM patients with and without dilated LV (n=16).

	LVEF(%)	LVEDD (mm)	Septal Thickness(mm)	Right Ventricular Hypertrophy(%)	NYHA Class	Death
Normal(n=7)	34±7	50±4	16±3	4(57%)	3.5±0.5	4(57%)
Dilated(n=9)	33±7	60±3	14±3	0(0%)	2.5±0.5	1(11%)
p	NS*	0.0001*	0.1*	0.02^	0.01*	0.1^

\*T-test,^Chi-square.

Conclusion: Hypokynetic HCM patients are characterized by earlier onset of disease, a high prevalence of family history, severe diastolic dysfunction and adverse prognosis. LV remodeling characterized by LV dilation and wall thinning allows better adaptation to hemodynamic load than small hypokynetic ventricles and is associated with less severe heart failure