

# **Increased Left Ventricular Mass As A Marker of Left Ventricular Hypertrophy In Normotensive Type2 DM Patients**

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By

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## Abstract

**Background:** diabetes is one of the most important metabolic conditions responsible for left ventricular (LV) dysfunction including LV hypertrophy. Increased left ventricular mass (LVM) is a strong predictive factor of LV hypertrophy.

**Study purpose, design, and methods:** LVM is suggested to be useful in detection of LVH in diabetics, our study included 100 persons distributed in the 2 groups: Group A (cases): 50 patients with type 2 DM with normal blood pressure without antihypertensive medication. Group B (controls): 50 normotensive non-diabetic patients as a control group. LVM was measured by trans-thoracic echocardiography using Devereux Formula.

**Results:** LVM values were significantly higher in cases than controls ( $187.11 \pm 60.83$  vs.  $119.15 \pm 41.87$ ,  $p < 0.001$ ). As well as, LVMI values were significantly higher in diabetic cases than controls ( $96.64 \pm 29.84$  vs.  $63.17 \pm 20.38$ ,  $p < 0.001$ ), Proportion of abnormal LVMI was higher in diabetic cases than controls (56% vs. 6%,  $p < 0.001$ ), There was a statistically significant positive correlation between LVM and several study parameters including mainly disease duration ( $r = 0.369$ ,  $p = 0.008$ ), FBS ( $r = 0.478$ ,  $p < 0.001$ ), 2HPP (0.400,  $p = 0.004$ ), HA1C (%) ( $r = 0.589$ ,  $p = 0.003$ ), LVEDD ( $r = 0.790$ ,  $p < 0.001$ ), LVESD ( $r = 0.388$ ,  $p = 0.005$ ), SWT ( $r = 0.897$ ,  $p < 0.001$ ), PWT ( $r = 0.808$ ,  $p < 0.001$ ), and LA ( $r = 0.322$ ,  $p = 0.022$ ).

**Conclusion:** LVM is significantly higher in normotensive type 2 DM patients when compared to controls. LVM is a good marker of LVH among normotensive diabetics and is markedly correlated with DM control and duration.