

# Diagnosis of early myocardial damage in asymptomatic diabetic patients using 2D speckle tracking echocardiography

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The aim of this paper is the analysis of 2D strain values and other values of LV such as: dV/dT among non-symptomatic diabetic patients (without documented heart disease) and the control group.<sup>1-4</sup>

One hundred patients with non-symptomatic diabetes mellitus were analyzed (55 males and 45 females) with an average age of 56 years (56 ± 20 years).

In the group of people without a verified disease, 50 individuals have been chosen (26 males and 24 females), with an average age of 55.3 years old (55.3 ± 17).

## RESULTS:

1. At parasternal views, there is a decrease of 2D strain in patients with diabetes, more emphasized in the MV level while at the PM level, these changes are less emphasized.
2. Decrease of longitudinal strain values (LS) at the 4C and 3C, below the normal values for the LC are registered. A decrease of RS values is registered in our study but they are within normal values for RS. Considering these two facts, it can be concluded that LS is the main damage which occurs and characterizes non-symptomatic diabetic people.
3. On the basis of these data, it may be stated that the value of under 18% of LS can be taken as the dominant value which is recorded in this study in patients with diabetes.
4. In relation to the duration of diabetes, a significant difference is recorded in 2D strain between patients with diabetes in relation to the duration of the disease.
5. The changes in LC are the first recorded changes in patients with diabetes.
6. In patients with diabetes and complications, decrease in values of 2D strain appear, which are more emphasized in LS.
7. A decrease in values of strain is registered in patients who were on therapy with insulin, unlike those without.
8. There is decrease of dV/dT in patients with diabetes
9. Extension of T2P values in patients with diabetes is registered.
10. A post systolic shortening phenomenon (PSS) is recorded at patients with diabetes compared to those without diabetes,
11. Increase of the left ventricular mass in patients with diabetes is recorded.

## LITERATURE

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