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Changes over Time in Hemoglobin A1c (HbA1C) Levels Predict Long-term Survival Following Acute Myocardial Infarction Among Patients with Diabetes Mellitus

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Abstract:

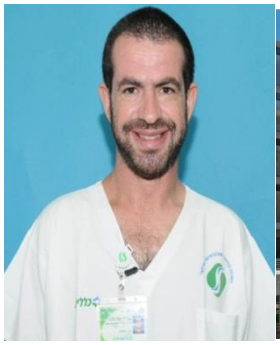
Frequent fluctuations of hemoglobin A1c (HbA1C) values are independent predictors of diabetic complications and patient outcomes. However, data regarding prognosis depending on the long-term changes in HbA1C among patients after acute myocardial infarction (AMI) are scarce. We evaluated the prognostic significance of HbA1C levels and their changes among diabetic patients after non-fatal AMI.

Patients with diabetes mellitus (DM) admitted with AMI (2002-2017) and survived >1year were evaluated. All the results of HbA1C values during the follow-up period (up to 10-years after discharge) were obtained and analyzed. The changes (Δ) of HbA1C were calculated for all pairs of tests in each patient. The time interval of ΔHbA1C values was classified as rapid (<1 year) and slow (≥1 year) change. The outcome was all-cause mortality.

A U-shaped association was observed between HbA1C and mortality: adjOR=1.887 and adjOR=1.302 for HbA1C <5.5% and ≥8.0% respectively, as compared with 5.5-6.5% (p<0.001). A U-shaped independent association between ΔHbA1C and mortality was found: adjOR=2.376 and adjOR=1.340 for the groups of <-2.5% and ≥2.5% HbA1C changes, respectively (p<0.001 for each), as compared to the group of minimal ΔHbA1C (±0.5%). A rapid increase in HbA1C (but not decrease) was associated with a greater risk for mortality.

Biography:

Ygal Plakht was currently working in the department of Nursing, Faculty of Health Sciences, Ben-Gurion University of the Negev. He has published many research articles and received many awards for his publications.



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