



Effect of endostatin and insulin-like growth factor-1 on angiogenesis in patients with acute myocardial infarction with diabetes mellitus type 2 under the influence of zofenopril

B. Shelest¹, V. Kapustnyk¹, D. Martovytskyi¹, Y. Kovalova²

¹Kharkiv National Medical University, Department of Internal and occupational diseases, Kharkiv, Ukraine,

²Kharkiv National Medical University, Department of Internal Medicine No. 2, Clinical Immunology and Allergology named after academician L.T. Malaya, Kharkiv, Ukraine

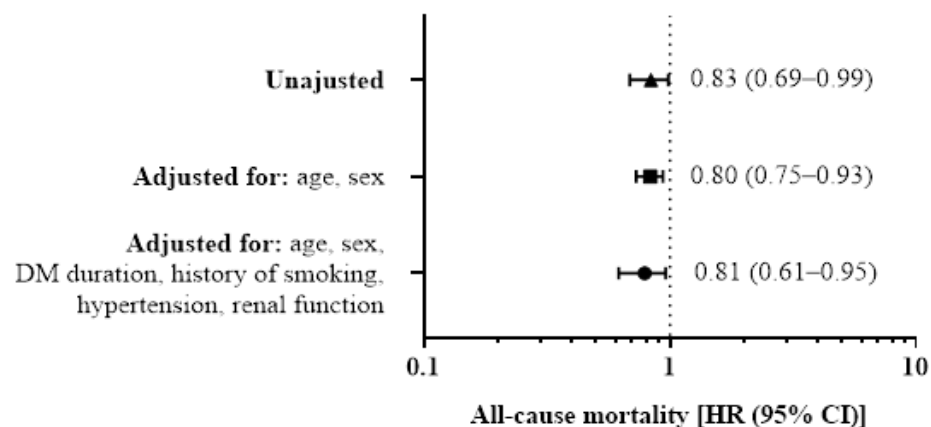
Background and Aims

To study zofenopril treatment effect on survival and endostatin and insulin-like growth factor-1 (IGF-1) levels in patients with acute myocardial infarction with ST elevation (STEMI) with concomitant diabetes mellitus type 2 (T2DM) in 6-month follow up.

Methods: The study was performed in 103 hospitalized patients with T2DM after myocardial infarction with ST elevation. Serum endostatin and IGF-1 levels were measured by enzyme-linked immunosorbent assay on the first day and 24-25 weeks. Two groups were analysed: the first one – treated with inclusion of zofenopril, and the second one – treatment with inclusion of enalapril with the same rest treatment.

Cox proportional hazards regression analyses were used to estimate hazard ratios (HRs) and 95% Confident Intervals (CI).

Results: As a result of a 6-month follow-up in a group of patients with complicated STEMI who received the recommended therapy with zofenopril, compared with another, similar in all parameters, group of patients who received therapy with enalapril, hazard ratio, 0.81; 95% CI, 0.61–0.95, $p=0.041$, after multivariable adjustment.



Conclusions: Treatment with zofenopril compared to enalapril has significantly better survival effect in patients with T2DM after STEMI in 6 month follow up. The activation of angiogenesis proved by significant increase of IGF-1 level was more pronounced in the zofenopril group.

There was a statistically significant increase of the IGF-1 level in patients who received zofenopril: first day 154.07 ± 11.15 ng / ml and at the end of follow-up 202.07 ± 12.22 ng / ml, $p < 0.001$.

