

Incretin Hormone Glucagon-Like Peptide-1 is Increased in Patients with Acute Phase ST Elevation Myocardial Infarction Treated with Primary PCI

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Background:

The incretin hormone glucagon-like peptide 1 (GLP-1), is assumed to have a cardio-protective effect. It is not known whether patients with acute myocardial infarction increase their GLP-1 levels.

Aim:

Determine GLP-1 levels in patients presenting with ST segment elevation myocardial infarction (STEMI).

Methods:

GLP-1 serum levels samples were determined in 12 consecutive patients presenting with acute STEMI before and 24h, 72h and 90 days after percutaneous coronary intervention (PCI).

Results:

Mean GLP-1 levels significantly increased within 24h after PCI from 27 ± 7.1 to 39.5 ± 11.4 $p < 0.04$ and returned to pre-admission levels after 3 months. No correlation was found between GLP-1 levels and any of the clinical and laboratory parameters or indicators of MI severity. However, both hypertension and smoking history (former and current) were associated with significantly lower GLP-1 levels as compared to normotensive and non-smoker patients: $p < 0.01$ and $p < 0.04$ respectively.

Conclusion:

A transient and significant rise in GLP-1 levels occurs in patients after ST elevation acute myocardial infarction treated with primary PCI. These data may suggest a role for GLP-1 in the physiologic response to acute ischemic heart disease.

Figure 1: GLP-1 levels at different times

