

Summary:

The purposes of the present study were to assess the incidence and clinical significance of elevated Ischemia Modified Albumin (IMA), a new biochemical marker of myocardial ischemia, creatine kinase-MB (CK-MB), troponin T and C-reactive protein after successful elective percutaneous coronary intervention (PCI) in patients with stable angina pectoris.

It is known, how often is elevated creatine kinase-MB (CK-MB), troponin T and C-reactive protein after PCI and it is discussed that it may be prognostically important. But the rate and prognostic significance of elevated IMA after PCI is uncertain.

IMA, TnT and CRP levels were measured. Samples were collected before and 2 (IMA), 12 (TnT) and 24h (CRP) after PCI in 60 patients including 43 patients undergoing PCI with coronary stent implantation and 17 patients without coronary stent implantation. All patients had normal levels of IMA and TnT at baseline. The primary endpoint was target lesion revascularisation (TLR).

No patients had clinical or electrocardiographic evidence of myocardial infarction after the procedure. Over a follow-up of 46 (43-50) months, 14 (23%) of patients experienced primary endpoint. 14 (23%) of all patients had elevated TnT, but this did not predict worse clinical outcome. Pre- or postprocedural CRP elevation was also not TLR related. All patients had elevated IMA after PCI - 142 (137,7 - 167,8) kU/l. Patients with primary endpoint had higher IMA level after PCI - 157,9 (134,2 - 239,1) kU/l versus 137,3 (130,6 - 154,3) kU/l, $p = 0,0002$. Elevated IMA over 130 U/ml was associated with higher risk of TLR ($p < 0,05$).

These data indicate that all patients undergoing elective PCI have evidence of myocardial ischaemia, as evidenced by IMA release. Elevated concentrations of IMA in the short-term aftermath of angioplasty seem to be a marker of higher rate of restenosis with target lesion revascularisation. CRP and TnT did not identify a population of worse long-term prognosis in this study.