113. Prognostic Implication of Residual Inflammatory Risk According to Disease Status in Patients Treated With Percutaneous Coronary Intervention

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Body

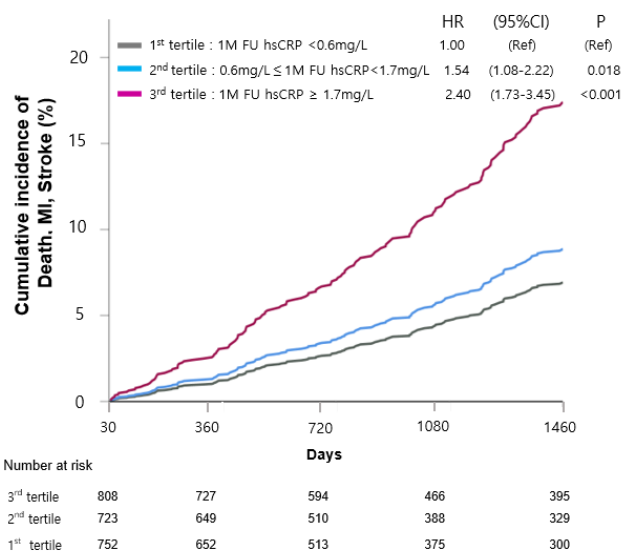
Background: Compared with stable angina, acute myocardial infarction (AMI) phenotype is related with the elevated inflammatory activity. However, time-dependent change of inflammatory level and its prognostic implication has not been fully understood according to the disease entity.

Methods: We enrolled total 4,263 patients who underwent percutaneous coronary intervention (PCI) with serial measurement of high-sensitivity C-reactive protein (hsCRP) at on-admission and 1-month post-PCI. The risks of MACE (a composite of death, MI or stroke), and major bleeding were evaluated up to 4 years after procedure.

Results: Compared with the non-AMI group (n=1,887), the AMI group (n=2,376) showed the significant decrease of hs-CRP during 1 month (▽0.5 vs. ▽0.1 mg/L; P<0.001). However, 1-month hs-CRP value still was higher in the AMI group than in the non-AMI group (median: 1.0 vs. 0.9 mg/L; P=0.001). During 1-month follow-up, high vs. low inflammatory risk (upper vs. lower tertile of hs-CRP) was significantly associated with increased rate of MACE in the AMI group (HR: 7.66; 95% CI: 2.29-25.59; P<0.001), but not in the non-AMI group (HR: 0.74; 95% CI: 0.12-4.40; P=0.736) (Fig1. A and B). From 1-month to 4-years, patients with high inflammatory risk showed the greater rate of MACE compared to those with low inflammatory risk, in both the AMI (HR: 2.40; 95% CI: 1.73-3.45; P<0.001) and non-AMI (HR: 2.67; 95% CI: 1.80-3.94; P<0.001) groups (Fig2. A and B).

Conclusion: In PCI-treated patients, patients presented with AMI showed the greater values of inflammatory activity and its prognostic implication during the acute phase, but combined inflammatory risk appeared similar across the disease entity during the subacute to chronic phase. This result may support that clinical benefit of post-PCI anti-inflammatory treatment would be constant regardless of the disease entity during the stabilized phase.

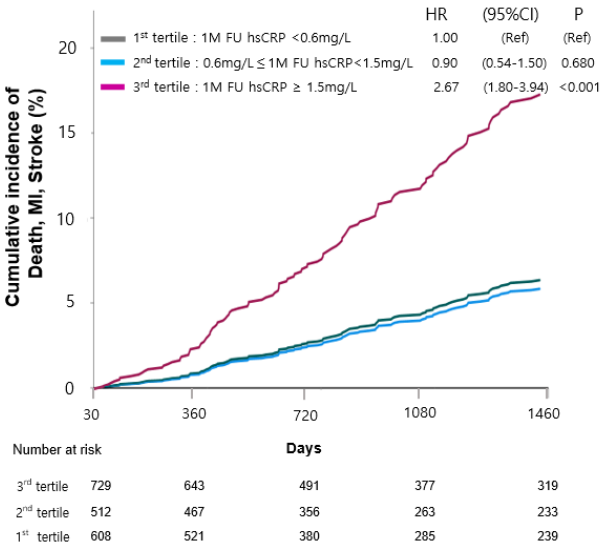
A. Time-to-event curves for MACE by tertile of hsCRP at 1-month after PCI in AMI group



Number at risk

3rd tertile	808	727	594	466	395
2nd tertile	723	649	510	388	329
1st tertile	752	652	513	375	300

B. Time-to-event curves for MACE by tertile of hsCRP at 1-month after PCI in non-AMI group



Number at risk

3rd tertile	729	643	491	377	319
2nd tertile	512	467	356	263	233
1st tertile	608	521	380	285	239

Clinical Implications: This result supports early phase anti-inflammatory treatment after PCI in a higher risk of ischemic events patients might be beneficial.