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Acute and Stable Ischemic Heart Disease

THE IMPACT OF PLATELET-FIBRIN CLOT STRENGTH AND INFLAMMATION ON INCIDENCE OF PERIPHERAL ARTERY DISEASE AND CLINICAL OUTCOMES IN PATIENTS WITH SIGNIFICANT CORONARY ARTERY DISEASE

Poster Contributions
Poster Hall, Hall A/B
Saturday, March 10, 2018, 3:45 p.m.-4:30 p.m.

Session Title: Managing Patients With Stable Ischemic Heart Disease: A Multitude of Things to Consider
Abstract Category: 02. Acute and Stable Ischemic Heart Disease: Clinical
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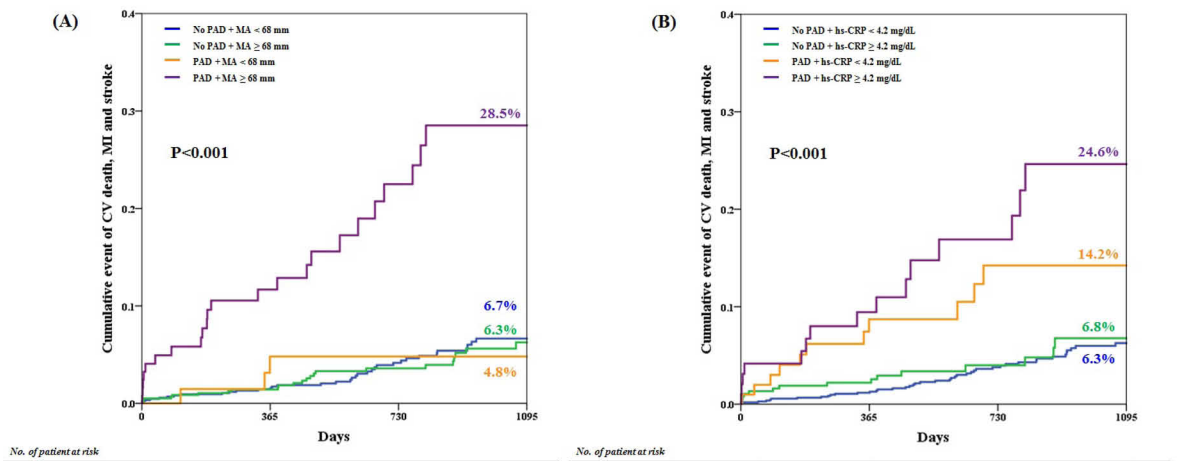
Background: PAD patients have widespread atherosclerosis and increased risk of CV events. However, the impact of clot strength and inflammation levels on incidence and adverse CV events of PAD remains uncertain.

Methods: We evaluated 1,667 patients who underwent PCI for significant coronary artery disease. Platelet-fibrin clot strength was indicated with MAthrombin (maximal amplitude measured by thromboelastography) and inflammation was measured by hs-CRP. PAD was defined with abnormal ABI (≤ 0.9 or > 1.4) before PCI. MACE was defined as a composite of CV death, nonfatal MI or nonfatal stroke.

Results: PAD was observed in 220 patients (12.1%). In the multivariate analysis, high levels of clot strength (MAthrombin ≥ 68 mm: OR, 1.75; 95% CI, 1.23 to 2.48; P = 0.002) and inflammation (hs-CRP ≥ 4.2 mg/dL: OR, 2.30; 95% CI, 1.55 to 3.41; P < 0.001) were significantly associated with PAD occurrence. During the follow-up post-PCI (median, 26 months), MACE was more frequently occurred in patients with vs. without PAD (18.7% vs. 6.4% at 3 years; HRadj, 1.77; 95% Cladj, 1.07 to 2.92; Padj = 0.027). Furthermore, combining presence of PAD and increased clot strength (or high inflammation level) significantly increased the risk of post-PCI MACE (Figure).

Conclusion: This study is the first to show the impact of clot strength and inflammation on incidence and clinical outcomes in PAD patients. Whether medical treatment to control these risk factors can improve clinical outcomes in PAD patients deserves the further study.



No. of patient at risk

No PAD + MA < 68 mm	874	705	409	232
No PAD + MA ≥ 68 mm	590	466	301	120
PAD + MA < 68 mm	76	57	38	26
PAD + MA ≥ 68 mm	123	76	42	17

No. of patient at risk

No PAD + hs cRP < 4.2 mg/dL	1083	896	574	296
No PAD + hs cRP ≥ 4.2 mg/dL	381	275	136	56
PAD + hs CRP < 4.2 mg/dL	103	72	44	28
PAD + hs CRP ≥ 4.2 mg/dL	96	61	36	15

Figure. Kaplan-Meier curves of outcomes combining presence of PAD and increased clot strength (A) or high inflammation level (B).