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Non Invasive Imaging (Echocardiography, Nuclear, PET, MR and CT)

PROGNOSTIC VALUE OF PLATELET-FIBRIN CLOT STRENGTH ON OCCURRENCE OF CARDIOVASCULAR EVENTS AFTER NON-CARDIAC SURGERY

Poster Contributions
Poster Hall, Hall C
Saturday, March 18, 2017, 3:45 p.m.-4:30 p.m.

Session Title: Non Invasive Imaging: Prognostic Implications of CT Angiography
Abstract Category: 27. Non Invasive Imaging: CT/Multimodality, Angiography, and Non-CT Angiography
Presentation Number: 1247-237

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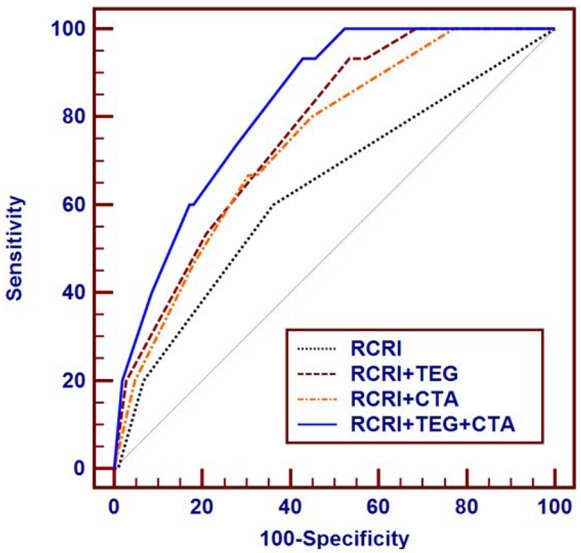
Background: We evaluate the complementary prognostic value of "Platelet-Fibrin Clot Strength" on post-op CV events compared with anatomy of coronary artery and classic risks.

Methods: PANDA was the prospective study to evaluate prognostic accuracy of CT coronary angiography (CTA) after non-cardiac surgery. "Platelet-Fibrin Clot Strength" measured by thrombelastography (TEG®) was evaluated in 120 patients. The estimating postop risks were classified according to revised cardiac risk index (RCRI), number of significant stenosis (≥ 50% stenosis by CTA), and thrombin-induced maximal amplitude ($MA_{thrombin}$ by TEG). Postop CV events were defined as CV death, MI, stroke and embolism.

Results: Fifteen patients (12.5%) suffered from postop CV events. By the ROC curve analysis, optimal cutoff of TEG®-$MA_{thrombin}$ was ≥ 67 mm (AUC: 0.719; 95% CI: 0.606 to 0.832; p = 0.006). RCRI-adjusted regression analyses showed that "TEG®-$MA_{thrombin}$ ≥ 67 mm" could predict significantly occurrence of CV events (HR: 12.78; 95% CI: 1.58 to 103.49; p = 0.017). When comparing ROC curves of combination models, TEG®-$MA_{thrombin}$ improved risk stratification than RCRI alone (C-statistic: 0.767 vs. 0.634; p = 0.017). Furthermore, combination of TEG®-$MA_{thrombin}$, CTA and RCRI together showed better discriminative power (C-statistic: 0.828).

Conclusions: Intrinsic hypercoagulability, as well as severity of coronary artery disease in addition to classic risks, increased predictive value on CV events after non-cardiac surgery.



RCRI: *revised cardiac risk index*
CTA: *maximal diameter stenosis on CTA*
TEG: *maximum amplitude ≥ 67 mm*