

Coronary artery diseases and its association with shortened activated partial thromboplastin time

Introduction: Hypercoagulability is recognized as a minor risk factor of coronary artery disease. The goal of this study was to assess the relation between type of clinical diagnosis and coagulation parameters in patients suspected for coronary artery disease who underwent coronary artery angiography.

Material & Methods: In this cross-sectional study we included patients who underwent coronary angiography in the catheterization laboratory of Tehran Heart Center, Tehran, Iran. Patients were presented with ST segment elevation myocardial infarction (STEMI), non-STEMI, unstable angina, and stable angina. The CAD status (positive/ negative), number of diseased vessels, Gensini score and presenting symptoms were recorded. Prothrombin time (PT), international normalized ratio (INR) and activated partial thromboplastin time (APTT) measured before angiography procedure.

Results:

Coagulation parameters (INR and APTT) were lower in females. International normalized ratio (INR) was significantly lower in cases with FBS > 100. After adjustment on potential confounder variables, relation between patient's presentations with APTT was statistically significant (OR=0.883, 95%CI= 0.827-0.942, P < 0.001), while odds for PT (OR=0.941, 95%CI= 0.800-1.105, P=0.457) and INR (OR=2.824, 95%CI= 0.463-17.226, P=0.261) were not statistically significant. Using ordinal logistic regression model, PT, INR, and APTT had no statistically significant relation with Gensini score levels after controlling for potential confounders. Moreover, the adjusted relation between number of involved vessels and PT (OR=1.157, 95%CI= 0.974-1.374, P=0.0097), INR (OR=1.447, 95%CI= 0.223-9.412, P=0.699) and APTT (OR=0.994, 95%CI= 0.930-1.061, P=0.850) was not statistically significant.

Conclusion:

We observed that APTT is correlated with the type of presentation by which patients were candidate for coronary angiography. Patients presented with STEMI had the lowest value of APTT and those presented with stable angina had the highest mean value for APTT. Future

studies are needed to clarify whether value of APTT in the patients undergoing coronary angiography have a potential to predict extent and severity of coronary stenosis.