**GENDER AND AGE PREDICT HYPORESPONSIVENESS TO CLOPIDOGREL BY PLATELET FUNCTION TESTING IN EMERENCY DEPARTMENT**

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Background: Sub-optimal platelet inhibition is seen in more than 30% of patients after coronary artery stenting. Hyporesponsiveness may be secondary to many variables such as age, sex, race, compliance, comorbid conditions, and genetic polymorphisms. The objective of our study was to evaluate the risk of hyporesponsiveness to clopidogrel based on age and gender in patients presenting to an emergency room with chest pain.

Methods: Platelet function assays were performed in 531 consecutive patients presenting to the hospital with chest pain as per chest pain center protocol if they were on clopidogrel and aspirin after coronary artery stenting. Multivariable logistic regression analysis was performed to evaluate the role of age and gender. Patients were labelled hyporesponders if they had P2Y12 Reaction Units (PRU) ¡Ý 230.

Results: Out of 531 patients, 221 (41.6%) had PRU ¡Ý 230. A multivariable logistic regression model was fitted to determine the relationship between clopidogrel hyporesponsiveness and several potential risk factors, including gender and age. There was a greater risk of Hyporesponsivenes among women than men (adjusted odds ratio, AOR=1.813, p=0.002) and a greater risk of Hyporesponsivenes with increased age (AOR=1.167 per decade, p=0.058).

Conclusions: Because of their higher odds of hyporesponsiveness to clopidogrel, consideration should be given to genetic testing or platelet function testing after DES in women and/or older patients.