**BLACK RACE A PREDICTOR OF HYPORESPONSIVENESS TO CLOPIDOGREL BY PLATELET FUNCTION TESTING IN EMERGENCY ROOM**

**R.K. Sharma1**, H.K. Reddy1, S.W. Erickson1, R.K. Sharma2, D.J. Voelker1, H. Dod2,

R. Legaspi1, V.N. Singh3, J.D. Marsh1

1University of Arkansas for Medical Sciences, Little Rock, AR, 2Medical Center of South Arkansas, El Dorado, AR, USA, 3University of South Florida, Tampa, FL, USA

Background: There is a widespread belief that poor outcome after drug eluting stents (DES) in African-Americans may be related to poor compliance or lower socio-economic status. Black race has been reported as an independent risk factor for developing stent thrombosis after DES despite higher clopidogrel compliance. The aim of our study was to evaluate the prevalence of hyporesponsiveness to clopidogrel based on race in patients presenting to an emergency room with chest pain by platelet function testing while on dual anti-platelet regimen.

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 race. Patients were labelled hyporesponders if they had P2Y12 Reactivity Units (PRU) ≥ 230.

Results: Out of 531 patients, 221 (41.6%) had PRU ≥ 230. A multivariable logistic regression model was applied to determine the relationship between clopidogrel hyporesponsiveness and several potential risk factors, including race. There was a greater risk of hyporesponsiveness among African-American patients (adjusted odds ratio, AOR=2.165, p=0.0003) compared to other patients.

Conclusions: There is higher prevalence of clopidogrel hyporesponsiveness among African-Americans compared to other patients, which may translate into higher stent thrombosis. This may not necessarily be a compliance issue but instead may be due to genetic polymorphisms. Consideration should be given to genetic testing or platelet function testing after DES in African-American patients.