**HOW DO ANTHROPOMETRIC MEASUREMENTS AND GENDER RELATE TO RACIAL DIFFERENCES IN EPICARDIAL FAT THICKNESS?**

**S. Salami**, M. Tucciarone, R. Bess, A. Kolluru, S. Szpunar, H. Rosman, G. Cohen

St. John Hospital and Medical Center, Detroit, MI, USA

Objective: Epicardial fat is known to be more prominent in non- Hispanic white men than in African- American men. The impact of gender, percent body fat, body mass index (BMI) and other anthropometric measures on epicardial fat has not been described.

Methods: We used two- dimensional transthoracic echocardiography to measure the epicardial fat thickness in 150 subjects who were admitted to the clinical decision unit for chest pain. Standard anthropometric measurements were performed and body mass index (BMI) and percent body fat were calculated. Data were analyzed using analysis of variance and multiple regression.

Results: On multivariate analysis (controlled for age, gender, BMI and waist circumference), epicardial fat was significantly greater in whites (b=1.43, p < 0.0001) and increased with age (b=0.06, p=0.001). Gender and BMI were not significant predictors after controlling for the other variables in the model. When percent body fat was substituted for BMI, race remained a significant predictor (b=1.47, p<0.0001) along with age (b=0.054, p=0.002) and % body fat (b=0.041, p=0.04).

Conclusion: Anterior epicardial fat thickness is greater in white than black subjects but similar in men and women of the same race. The difference by race remained even after controlling for percent body fat, which was also a significant predictor. Further studies are needed to understand how these findings relate to cardiovascular risk.