THE ROLE OF DYSLIPIDEMIA AND HMG-COA REDUCTASE INHIBITORS IN PREVENTING ADVERSE CARDIAC EVENTS IN PATIENTS WITH MODERATE AORTIC STENOSIS.

J John, S Kaur, P Budhiraja, P Sud, H Thai. Section of Cardiology, Department of Medicine, SAVAHCS Medical Center and the University of Arizona, Tucson, AZ.

**Background:** Evidence suggests that aortic stenosis (AS) may be related to atherosclerosis and dyslipidemia. This is supported by data demonstrating echocardiographic attenuation of AS progression by HMG-CoA reductase inhibitors (statins). Unfortunately, not much data are available concerning the role of statin therapy in the clinical progression of AS. We attempted to clarify if dyslipidemia and statin therapy has any role in the clinical outcomes of patients with AS.

**Methods:** A review of 272 patients with moderate AS was performed. Data analyzed included current lipid profiles and use of statins. The primary endpoints examined included the major adverse cardiac events (MACE) such as angina, syncope, heart failure, strokes, and hospitalizations; In addition secondary endpoints such as all cause mortality and aortic valve replacement (AVR) were also evaluated. Logistic regression analysis (LRA) was used to adjust for potential confounding factors including coronary artery disease (CAD), diabetes, renal insufficiency, hypertension and current smoking.

**Results:** 272 patients, with a mean age of 74.8 and a mean AVA of 1.2 cm² were included. 141 patients (51.8%) were on a statin. LRA revealed an adjusted Odds Ratio of 3.16 ($p < 0.001$) with regard to increased MACE among patients with LDL cholesterol > 100 mg/dL. There was no association between statin use and reduction in MACE ($p=0.82$), Aortic Valve Replacement ($p=0.94$) as well as all-cause mortality ($p=0.46$). Elevated LDL ($p=0.016$), low HDL ($p=0.018$) and high non-HDL cholesterol ($p=0.05$) were all independent predictors of all cause mortality and MACE.

**Conclusions:** In patients with AS there was no significant correlation between statin use and a reduction in event rates. Nevertheless, major markers of dyslipidemia were significantly associated with all cause mortality and MACE in patients with AS. This suggests that in patients with AS, the clinical outcomes appear to be determined by the mechanical obstruction. The role of statin therapy maybe limited to preventing development of AS in patients with aortic sclerosis.