**ASSOCIATION BETWEEN HIGH-DENSITY LIPOPROTEIN AND CARDIOVASCULAR DISEASE OUTCOMES**

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*Background:* Epidemiologic evidence has demonstrated an inverse relationship between high-density lipoprotein cholesterol (HDL-C) and subsequent cardiovascular (CV) disease outcomes; however, pharmacologic interventions have not been shown to decrease future coronary events. We examined the association between HDL-C levels, in conjunction with other CV risk factors, and co-morbid diseases.

*Methods:* A retrospective chart review was performed over a 4-month period during which time 9,000 unique patients were screened. We identified 365 patients of whom 265 patients had an HDL-C ≤ 25 and 100 with HDL-C ≥ 85 mg/dL. Body mass index (BMI), low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), total cholesterol, sedimentation rate, C-reactive protein and pertient medical co-morbidities were identified in each patient. Co-morbidities identified were diabetes mellitus (DM), hyperlipidemia (HLD), hypertension (HTN), inflammatory diseases (e.g. osteoarthritis and hepatitis C), and any known history of coronary or vascular disease.

*Results:* This predominantly male (94.2%) cohort had an average age of 64.2 years. The average BMI among the high HDL-C, low HDL-C and low HDL-C with history of coronary artery disease (CAD) groups was 26.1, 33.27 and 32.0 kg/m2 respectively. The prevalence of type 2 DM among both groups was 9% in the high HDL-C group compared with 53.5% in the low HDL-C group. The average TG level in the high HDL-C group was 90.5 mg/dL compared with 352.2 mg/d in the low HDL-C group. Sixty patients in the high HDL-C group were shown to have HTN compared with 193 in the low HDL-C group. Ten patients in the high HDL-C group were identified to have a history of CAD compared with 81 in the low HDL-C group. Osteoarthritis was found to be prevalent in both groups, with 20 in the high HDL-C group and 25 in low HDL-C group. Hepatitis C infection was found to be more prevalent in the low HDL-C group, 12 compared with 2.

*Conclusions:* The higher incidence of medical co-morbidities, including type II DM, HLD, HTN, and history cardiovascular disease is associated with very low HDL-C levels. There may be a relationship between inflammatory disorders, such as hepatitis C and HDL-C levels which should be further explored in larger patient populations.