intervention measures for LDL, HDL, triglycerides, total cholesterol, adherence and quality-of-life. A random-effects meta-analysis combined data between pharmacist-intervention and standard-care groups. Chi-square tested heterogeneity of effects. Publication bias was assessed using funnel plots and Begg-Mazumdar statistic. RESULTS: Fifty-one studies were found; 22 met inclusion/exclusion criteria. Study settings included medical clinic/center (n = 11), community pharmacy (n = 8), hospital (n = 2) and patient homes (n = 1). Patient education (77%) and medication management (73%) were most common interventions. The average patient follow-up period was 9.8 ± 6.4 months. Quality of pharmacist-intervention studies was considered “fair” (65%, SD = 6.6%). Total cholesterol was significantly reduced from baseline (34.3 ± 10.3 mg/dL, p < 0.001) and also significantly above control groups (22.0 ± 10.4 mg/dL, p = 0.034). LDL was reduced significantly from baseline (38.6 ± 12.4 mg/dL, p = 0.002); but not significantly more than controls (22.1 ± 12.0 mg/dL, p = 0.065). A clinically relevant but not statistically significant reduction in triglycerides was found. Patients’ adherence to pharmacotherapeutic regimens (39 studies reported significant results after pharmacists’ interventions) and quality of life (2/2 significant) were considered possibly not sensitive and possibly sensitive to pharmacist interventions, respectively. CONCLUSION: Total cholesterol is sensitive to pharmacist’s interventions while LDL and triglycerides levels are possibly sensitive to those interventions. Further research should evaluate specific determinants of pharmacist-sensitive outcomes.

ROLE OF OSTEOPROTEGERIN AND RANKL IN BONE AND VASCULAR CALCIFICATION

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OBJECTIVE: New members of the TNF-signaling superfamily, osteoprotegerin (OPG) and receptor activator of nuclear factor-kB ligand (RANKL), are thought to play an important role in vascular calcification and bone remodeling and might represent the molecular link between arterial calcification and bone resorption. The purpose of this study was to determine whether OPG and/or RANKL mediate the observed association between coronary and bone calcification in postmenopausal women.

METHODS: Among the members of the Rancho Bernardo longitudinal study, 92 postmenopausal women (ages 58–81 years) taking estrogen therapy (ET) who underwent assessment of bone mineral density (BMD) and coronary artery calcification (CAC) and had serum OPG and RANKL levels measured between 1998–2002 are the basis of this report. RESULTS: Neither OPG nor RANKL levels varied among subjects with and without CAC in multivariate analysis. Increase in BMD at the hip was associated with decrease in CAC (OR = 0.52; 95% CI: 0.29–0.93) independent of age, fat-free mass, HDL cholesterol, current smoking, and use of cholesterol-lowering medications. Other skeletal sites demonstrated a similar pattern. Addition of RANKL and/or OPG in the model had minimal effect on the magnitude or statistical significance of the BMD–CAC association. Additionally, a test of interaction indicated that RANKL and OPG are not significant effect modifiers of the association. CONCLUSION: Serum OPG and RANKL do not account for the observed association between bone and coronary artery calcification among postmenopausal women using ET.

RISK OF HOSPITALIZATION ASSOCIATED WITH
BETA-BLOCKER THERAPY IN PATIENTS OF CHRONIC HEART FAILURE AND DIABETES: A MEDICAID STUDY

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OBJECTIVE: Beta-blocker therapy, well established in the treatment of CHF, is considered contraindicated in patients with concomitant diabetes by many physicians due to concerns of increased incidence of hypoglycemia, worsening dyslipidemia, and decreased insulin sensitivity. Purpose of this study is to determine the association between beta-blocker therapy and hospitalization in patients with chronic heart failure (CHF) and diabetes. METHODS: The study was a retrospective analysis utilizing the pharmacy, inpatient and outpatient claims linked with eligibility files for persons enrolled in the Georgia Medicaid benefits through the year 2001. Patients who received both diagnosis of chronic heart failure and diabetes were identified. The study cohort was further categorized into treatment and comparison groups according to their exposure to Beta-blocker. A stepwise logistic regression analysis was employed to assess the association between taking beta-blocker and hospitalization among CHF patients with diabetes. RESULTS: Three hundred ninety patients with beta-blocker exposure and 642 not-exposed patients were identified. Two hundred thirty eight patients were hospitalized and 799 had no hospitalization. Majority of the cohort was female 788 (76.36%), black 531 (51.45%) and in the age group of 40–65 years 966 (93.60%). Metoprolol was the most commonly used beta-blocker with 12,149 claims (51.83%) followed by Carvedilol 6169 (26.32%). The most common co-morbid conditions among patients were found to be Hypertension, Ischemic Heart Disease and Chronic Obstructive Pulmonary Disease. Diuretics, ACE inhibitors and Digoxin use were found to be the common concurrent therapy taken by the patients. After controlling for factors like age, race, gender, common co-medications and co-morbid conditions, there was no significant association between hospitalization and beta-blockers use in patients with Chronic Heart Failure and Diabetes. CONCLUSION: Despite the potential contraindication, the utilization of beta-blocker does not lead to a higher rate of hospitalization among CHF patients with diabetes.