TCT-118
Triglyceride to HDL-C Ratio is the Independent Predictor for Cardiac Events in Patients with Chronic Kidney Disease after Coronary Intervention
Katsumi Miyachi1, Hiroshi Tamura1, Hirokazu Komishi1, Ryo Naito1, Hiroyuki Daida2
1Juntendo University, Tokyo, Japan, 2Department of Cardiology, Juntendo University Hospital, Tokyo, Tokyo

Background: Chronic kidney disease (CKD) is a health problem, associated with high cardiovascular events. Increased cardiovascular risk cannot be explained only by traditional risk factors. Patients with renal dysfunction have significant disturbances in lipoprotein metabolism. Especially, high-density lipoprotein cholesterol (HDL-C) and triglyceride (TG) in these patients becomes dysfunctional. However, it remained uncertain whether the TG to HDL-C ratio is-associated with adverse cardiovascular (CV) events in patients with CKD after coronary intervention.

Methods: Between 1999 and 2011, a total of 3508 patients received PCI. Among them, consecutively 3306 patients whose data are available regarding laboratory and procedural data at PCI without hemodialysis were analyzed. All eligible patients were divided into 2 groups according to medium TG/HDL-C level (High TG/HDL-C > 2.80 group and Low TG/HDL-C ≤ 2.80 group). We examined the association of TG/HDL-C with CV events (all-cause mortality, acute coronary syndrome (ACS) and target vessel revascularization) according to renal function. Estimated GFR (eGFR) was calculated using the eGFRCreat. Patients with eGFR < 60 ml/min per 1.73 m2 for 3 months are defined as CKD. The effect of increasing TG/HDL-C serum levels was assessed using Cox proportional hazard models.

Results: The median follow-up period was 4.7 years. Cumulative event-free survival was significantly lower in the high TG/HDL-C group than in the low TG/HDL-C group (P = 0.0006) in patients with CKD. In multivariable analysis, higher TG/HDL-C was associated with increased risk of CV events and mortality plus ACS (hazard ratio [HR], 1.25, 95% confidence interval [95% CI], 1.03-1.54 [P = 0.025]; HR, 1.31, 95% CI, 1.03-1.69 [P = 0.031]). Conversely, in patients without CKD, higher TG/HDL-C did not associate with higher risk for CV events and mortality plus ACS (HR, 0.94, 95% CI, 0.82-1.09 [P = 0.43]; HR, 1.01, 95% CI, 0.84-1.21 [P = 0.93]). There were no significant differences in clinical and angiographic background between the high TG/HDL group and low TG/HDL group.

Conclusions: High TG/HDL-C level could be associated with poor prognosis following PCI in patients with CKD.

TCT-119
Utility Of The Framingham Risk Score In Predicting Secondary Events In Patients Following Percutaneous Coronary Intervention – A Time-Trend Analysis
Jaskaran D. Saro1, Ryan Lennon1, Amir Lerman2
1Mayo Clinic, Rochester, MN, 2Mayo Clinic, Rochester, United States

Background: The Framingham Risk Score (FRS) has been shown to be effective in predicting the risk of cardiovascular disease and primary events such as myocardial infarction. However, there is little evidence showing its effective use in predicting secondary events in patients with established coronary artery disease. This study aims to evaluate the utility of the FRS in predicting secondary events in patients following PCI at a tertiary referral center across a 17-year period of time and to ascertain whether there is a change in its utility in predicting secondary events across this time period.

Methods: The FRS of 25,519 consecutive patients presenting to the catheterization laboratory at a tertiary referral center between January 1994 and December 2010 was determined (71% male, mean age 66.5 ± 12.1, mean score 7.0 ± 3.3). Patients were divided into 4 groups depending on their 10-year cardiovascular disease risk (< 5%, 5-10%, 10-20% and > 20%) and were followed up for a median duration of 109 months (IQR 63-155) for secondary events including myocardial infarction, death and target-vessel revascularization. The association between FRS and secondary event rate was then assessed. Patients were also separately divided into 5 equal temporal groups depending on the date of PCI and the association between each group’s FRS and secondary event rate was assessed and compared between groups.

Results: The FRS was shown to be significantly associated with secondary event rate following PCI (p < 0.001) but the differences between risk groups were not large (C-statistic 0.54). To assess for temporal changes in the association between FRS and secondary event rate, the data from the 5 temporal groups was fit to a Cox model with an interaction between FRS and time. The association between FRS and secondary event rate across the different temporal groups did not change significantly (p = 0.10).

Conclusions: This study shows that the FRS may be used to predict secondary events in patients following PCI but lacks the ability to discriminate very well between high and low risk patients. The FRS has also been shown to retain its utility in predicting secondary events amongst these patients across different periods of time.