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**Inflammation modifies the relationship between HDL and risk of adverse cardiovascular events in Korean patients with chronic kidney disease: Results from KNOW-CKD**

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**Objectives:** To examine whether high-sensitive C-reactive protein (hsCRP), an inflammatory marker, could modify the relationship between HDL cholesterol (HDL-C) level and risk of adverse outcome in patients with CKD.

**Methods:** We included a total of 1,861 patients from KNOW-CKD. Patients were classified into four groups according to HDL-C level of <40, 40-49, 50-59, and ≥60 mg/dL. The primary outcome was an extended major cardiovascular events (eMACE) or cardiac death. The secondary endpoints included separate outcomes of non-fatal MACE and all-cause death. We analyzed the association of HDL-C with adverse outcomes using multivariable Cox proportional hazard model. This association was further examined with or without inflammation, defined as hsCRP level ≥1.0 mg/dl.

**Results:** The mean HDL-C level was 49.2±15.4 mg/dl. During the mean follow-up of 4.1 years (10,215.8 person-years), the primary outcome events occurred in 139 (7.5%) patients with incidence rate of 16.2 per 1,000 person-years. In multivariable Cox analysis after adjustment of confounders, HDL-C was not associated with the primary outcome. In patients with hsCRP <1.0 mg/dl, there was an inverse association of HDL-C with the primary outcome. The HRs (95% CI) for HDL-C of <40-49, 50-59, and ≥60 mg/dl were 1.00 (0.56-1.81), 0.93 (0.48-1.81), and 0.40 (0.17-0.93), compared with HDL of <40 mg/dL. In contrast, in patients with hsCRP ≥1.0 mg/dl, this association was reversed. The corresponding HRs for each HDL-C category were 1.25 (0.64-2.46), 1.85 (0.85-4.00) and 2.18 (0.94-5.04), respectively. In the analyses of secondary outcomes, there was a significant association of higher HDL-C with lower risk of non-fatal MACE in patients with hsCRP <1.0 mg/dl. HDL-C did not associate with risk of all-cause death.

**Conclusions:** In Korean CKD patients, inflammation modifies the relationship between HDL-C and adverse cardiovascular outcome and HDL-C is significantly associated with lower risk of eMACE in patients with hsCRP <1.0 mg/dl.