

Lipid-Lowering Therapy in ESRD Patient

Tae Ik Chang

NHIS Medical Center, Korea

Notwithstanding the general consensus about the pathophysiological relevance of hyperlipidemia such as high levels of LDL-C, there has been controversy regarding lipid-lowering therapy in ESRD patients with maintenance dialysis. For instance, in contrast to the general population, serum LDL-C level has not been found to be a reliable indicator of cardiovascular risk in patients with ESRD. These epidemiologic observations are further supported by the failure of recent randomized clinical trials which showed that lowering serum LDL-C levels using statin therapy does not lead to reduction in cardiovascular events or mortality in patients on hemodialysis. Moreover, a number of large observational studies have demonstrated an increased risk of mortality associated with lower total cholesterol and LDL-C levels in patient population on dialysis. In this regards, current clinical guidelines do not recommend initiating statin or statin/ezetimibe in dialysis patients, in part related to lack of evidence derived from randomized trial. The mechanisms responsible for these paradoxical associations between LDL-C levels and clinical outcomes among ESRD population are unclear at this time, but it is now becoming clear that in the setting of uremia, oxidative stress, and inflammation such as ESRD, make-up/nature of a particular lipoprotein is much more important than its quantity in determining its impact on cardiovascular disease and mortality. These findings further highlight the need for a more in-depth, qualitative, in addition to quantitative, evaluation of lipids and lipoproteins and their outcomes in patients with ESRD given the unique nature of dyslipidemia and cardiovascular disease in this patient population.