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Effect of Different Statin Intensity in Chronic Kidney Disease Patients

To the Editor:

We read with interest an article written by Smith et al.[1] The authors performed a comparative effectiveness analysis of statin therapy by different levels of the estimated glomerular filtration rate (eGFR). They found relatively similar reduction in deaths and cardiovascular disease hospitalization across the range of eGFR, with higher rates in patients with lower eGFR. The authors suggested starting statin treatment in patients with lower levels of kidney function. However, the authors did not discuss potential effects of different doses and types of statins on outcome in chronic kidney disease patients.

In a recent meta-analysis,[2] a pooled analysis of randomized-controlled trials in chronic kidney disease populations was done. It revealed that only high-intensity statin receivers (atorvastatin 40-80 mg or rosuvastatin 20-40 mg) had significantly higher kidney function compared with control (pooled mean difference = 3.35 mL/min/1.73 m^2). No significant difference in eGFR was found with moderate- and low-intensity statin therapy. Although this meta-analysis did not assess mortality as an outcome, the finding from The Study of Heart and Renal Protection (SHARP)[3] trial revealed that the use of low- or moderate-intensity statin did not significantly prevent death in chronic kidney disease patients. This finding is likely explained by the effect of greater reduction of low-density lipoprotein cholesterol in high-intensity statin therapy.

We agree with the authors that chronic kidney disease patients should be considered for starting treatment with statin. We want to emphasize that high-intensity statin may have higher benefits in this population, at least to slow deterioration of kidney function. Further studies are needed to assess mortality benefits of different statin intensities in chronic kidney disease patients.

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References

1. Smith DH, Johnson ES, Boudreau DM, et al. Comparative effectiveness of statin therapy in chronic kidney disease and acute myocardial infarction: a retrospective cohort study. *Am J Med*. 2015 Jul 11. http://dx.doi.org/10.1016/j.amjmed.2015.06.030. [Epub ahead of print].
2. Sanguankeo A, Upala S, Cheungpasitporn W, Ungprasert P, Knight EL. Effects of statins on renal outcome in chronic kidney disease patients: a systematic review and meta-analysis. *PLoS One*. 2015;10(7):e0132970.
3. Baigent C, Landray MJ, Reith C, et al. The effects of lowering LDL cholesterol with simvastatin plus ezetimibe in patients with chronic kidney disease (Study of Heart and Renal Protection): a randomised placebo-controlled trial. *Lancet*. 2011;377(9784):2181-2192.

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