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Treatment with IL-17 inhibitors is associated with reduced eGFR in patients with psoriasis or psoriatic arthritis: a retrospective cohort study

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We aimed to study the effect of IL-17 inhibitors on eGFR in human subjects. We conducted a single-center retrospective cohort study of patients who had been treated with an IL-17 inhibitor (ixekuzumab or secukinumab), for the treatment of psoriasis (P) or psoriatic arthritis (PA). Demographics and serum creatinine values were extracted from the electronic medical record. Aggregated data in a 6 month window at 6-months prior to initiation of the IL-17 inhibitor and 12 months after initiation of the IL-17 inhibitor were analyzed using paired t-test. Estimated GFR was calculated using the CKD-Epi equation. We identified 307 patients who had been treated with IL-17 inhibitors. We included 65 patients who had serum creatinine values at pre-specified time periods before and after initiation of treatment. At baseline, the mean age was 50.3±12 years, 43% were men, 51(78%) had a diagnosis of hypertension, 11(17%) had a diagnosis of diabetes, and mean eGFR was 83.6 mL/minute/1.73 m^2. One year after initiation of IL-17 inhibitor therapy, mean eGFR was significantly lower at 78.7 mL/minute/1.73 m^2 ($p < 0.001$). After excluding patients taking medications known to affect eGFR (n=26), there was still a significant decrease in eGFR after 1 year (88.4 versus 83.2 ml/minute/1.73 m^2, $p < 0.01$). In patients with P or PA, IL-17 inhibitor therapy is associated with a reduction in eGFR at 1 year after initiation of treatment. Prospective study with longer follow-up is needed to determine the long-term effect of IL-17 inhibitor therapy on kidney function.