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Effect of spherical absorptive carbon among chronic kidney disease patients

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Objectives : AST-120 is an oral spherical carbon adsorbent composed of porous carbon particles; however, evidence regarding its effectiveness in delaying chronic kidney disease (CKD) progression remains insufficient. We aimed to evaluate the impact of AST-120 treatment on CKD progression in patients with CKD stage 3 or higher using nationwide data
Methods : In this retrospective cohort study, we included patients diagnosed with CKD stage ≥3 from the Korea National Health Insurance System database between January 2020 and December 2022. Outcomes were compared between AST-120 users (N=1,289) and non-users (N=1,289) after 1:1 propensity score matching (PSM).
Results : After PSM, the risk of dialysis initiation was not significantly different between AST-120 users and non-users (Hazard Ratio [HR]=0.62, 95% CI: 0.23–1.21). However, AST-120 users showed a significantly longer duration from CKD stage 3 diagnosis to progression to end-stage kidney disease (ESKD) compared to non-users (246.8 days vs. 118.6 days, $p<0.001$).
Conclusions : This nationwide cohort study suggests that AST-120 treatment may delay progression from CKD stage 3 to ESKD, although it did not significantly reduce the risk of dialysis initiation.