Effectiveness of Benzbromarone in Hyperuricemic Patients with Chronic Kidney Disease

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Background:
Benzbromarone is an uricosuric agent to control hyperuricemia. The hypouricemic effect of benzbromarone may be limited in patients with renal insufficiency.

Objectives:
This study try to determine if it is effective to the use of benzbromarone in patients with chronic kidney disease (CKD).

Method:
We retrospectively evaluated serum urate level and renal function changes in 133 patients with stage 3-5 CKD (120 patients in stage 3, 11 patients in stage 4, and 2 patients in stage 5) in a regional hospital between March 2012 and October 2017. They newly received 25-150 mg/day benzbromarone monotherapy for hyperuricemia. The main outcome such as serum urate level, serum creatinine level, and estimated glomerular filtration rate (eGFR) were measured before and after benzbromarone monotherapy. The statistical method we used was the paired sample t-test.

Result:
This study analyzed 96 men and 37 women aged from 38 to 91 years. Serum urate level significantly decreased from 9.30±1.39 to 5.94 ± 2.06 mg/dL ($P<0.001$) within the first 6 months. No significant changes in the renal function within the first 6 months: serum creatinine level was from 1.60±0.63 to 1.59 ±0.63 mg/dL ($P=0.902$); eGFR was from 46.00±10.83 to 46.22 ± 11.53 mL/minute/1.73 m^2 ($P=0.677$).

Conclusion:
Although renal insufficiency was not improved by lowering serum urate level with benzbromarone, there was no significantrenal function deterioration. The results suggested that benzbromarone was applicable for hyperuricemic patients with CKD.

Keyword:
Benzbromarone, Hyperuricemia, Chronic kidney diseas