

## #1958 - Effects of Allopurinol on renal residual function of patients with end stage renal disease undergoing peritoneal dialysis: A randomized controlled clinical trial

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### Body

**Introduction:** There is increasing evidence to show that hyperuricemia may have a pathogenic role in the progression of renal diseases. We performed a prospective, randomized, controlled trial to investigate the renal effects of allopurinol treatment in hyperuricemic patients with end stage renal disease (ESRD) who undergo peritoneal dialysis.

**Methods and materials:** This was a unicenter, randomized controlled clinical trial, conducted in "Alzahra Hospital, Isfahan, Iran". Patients were randomly assigned into treatment or control group. Treatment-group patients were administered a starting allopurinol dose of 100 mg/d. The dose was adjusted according to serum uric acid level, aiming to maintain uric acid levels within the normal range. Subjects were followed up for 6 months after receiving medicine. Residual renal function (RRF) assessed by measuring the renal component of Kt/V urea and estimating the patient's glomerular filtration rate (GFR) by calculating the mean of urea and creatinine clearance. Also, systolic and diastolic blood pressure and serum level of creatinine measured every three months during the follow up period.

**Results:** 80 patients enrolled in the study and divided in two groups, including 40 ESRD patients receiving allopurinol and 40 ESRD didn't receive allopurinol and considered as control group. GFR measurements showed that there was not a significant difference between patients' RRF of two groups. However, allopurinol group had higher RRF than

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control group during the follow up period. Evaluating RRF by Kt/V showed the same results.

**Conclusion:** In conclusion, our study demonstrated significant effects of allopurinol on decreasing serum levels of uric acid in ESRD patients undergoing peritoneal dialysis. In the other hand, renal residual function of patients under treatment with allopurinol was better than control group. We recommend that further studies should be conducted on the effects of allopurinol with greater sample size and longer time of follow up.

**Keyword:** End stage renal disease, peritoneal dialysis, Allopurinol

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03 November 2018 16:05