P1215 **INVERSE ASSOCIATION BETWEEN DIALYSATE OXALATE REMOVAL AND INTRAPERITONEAL INFLAMMATION IN PERITONEAL DIALYSIS PATIENTS**

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Background and Aims: Due to inadequate oxalate removal, hyperoxalemia is a well-established feature in end-stage renal disease (ESRD) patients. Considering the fact that oxalate is primarily removed by kidneys in healthy individuals, we hypothesized that oxalate elimination in peritoneal dialysis (PD) patients could be compensated by PD effluent (PDE). In addition, its dialysate concentration could be associated with intra-peritoneal inflammation.

In the present study, we investigated oxalate excretion in PDE and its association with intraperitoneal inflammation in PD patients.

Method: We performed a cross-sectional single-center observational study involving 30 PD patients (17 women and 13 men). The average age was 48.3 ± 9.2 years. Among them, there were 11 (37%) diabetics and 19 (63%) non-diabetic patients. The mean time on PD was 32 [18.5-47] months.

Parameters of dialysis adequacy, cytokines concentration and oxalate removal levels with PDE were determined. The spectrophotometric method was performed for determining oxalate concentration in PDE using oxalate oxidase/peroxidase reagent (BioSystems, Spain). The ELISA method was used for the determination of interleukin-6 (IL-6) and monocyte chemoattractant protein-1 (MCP-1) measurements in dialysate.

For the statistical analysis, we used Kruskal-Wallis's t-test and Spearman's rank correlation test. The median (Me) and interquartile ranges [Q25 - Q75] were calculated according to abnormal distribution. All statistical analyses were performed using MedCalc.

Results: No differences in peritoneal oxalate, IL-6, and MCP-1 excretion between diabetics and non-diabetic patients were observed (Table 1).

However, the higher dialysate oxalate concentration was, the lower residual renal function was observed ($r = -0.69$; $p < 0.0001$). Surprisingly, increased dialysate oxalate level was associated with low IL-6 ($r = -0.54$; $p = 0.002$) (Fig. 1) and MCP-1 ($r = -0.7$; $p < 0.0001$) (Fig. 2) concentrations in PDE.

Conclusion: To the best of our knowledge, the association between PDE oxalate excretion and proinflammatory mediators' concentrations in PD patients has never been reported before. We suppose that peritoneal oxalate excretion might be involved in the intraperitoneal inflammation process. Further studies are needed to determine the possible pathogenetic role of dialysate oxalate removal in the conditions of intraperitoneal inflammation in PD patients.

Table 1. PDE levels of oxalate, IL-6, and MCP-1 in diabetic PD patients compared with non-diabetics.

	Diabetics (n = 11)	Non-diabetics (n = 19)	P
Oxalate (mg/d)	11.6 [10.4-13.7]	12.8 [10.1-13.4]	0.39
IL-6 (pg/ml)	51.1 [20.03-94.5]	29.4 [22.7-81.9]	0.29
MCP-1 (pg/ml)	501.5 [431-622]	605.7 [361-707]	0.88

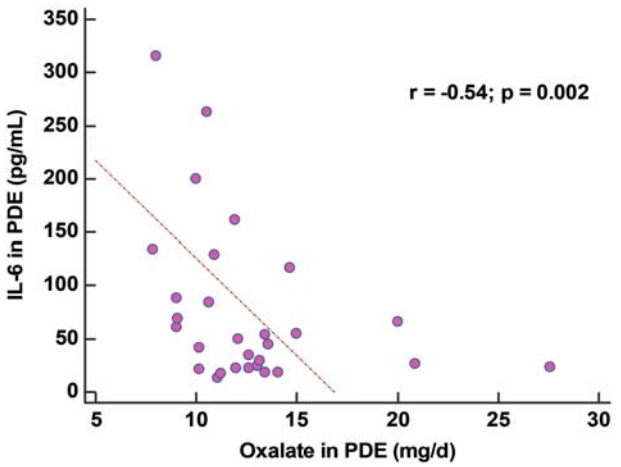

Figure 1. Association between dialysate oxalate and IL-6 concentrations in PD patients.

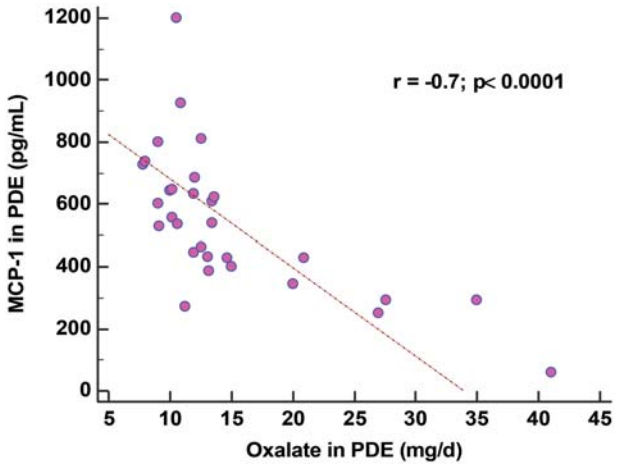

Figure 2. Association between dialysate oxalate and MCP-1concentrations in PD patients.