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ELEVATION OF SERUM SECRETORY PHOSPHOLIPASE A2 IN CAPD PATIENTS : A PRELIMINARY STUDY

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BACKGROUND Phospholipases A2 (PLA2) are enzymes that hydrolyze the *sn*-2-acyl bond of phospholipids of cell membrane and lipoproteins and yield precursors of various proinflammatory lipid mediators - free fatty acids and lysophospholipids. Several studies showed that secretory nonpancreatic type II phospholipase A2 (sPLA2) might contribute to the pathogenesis of various inflammatory diseases. Dialysis patients have high risk of coronary artery disease (CAD), and sPLA2 may be correlated with C-reactive protein and may be an independent risk factor for CAD. Therefore, we studied the relationships of sPLA2 and other inflammation- related parameters in dialysis patients.

MATERIALS AND METHODS Fifteen CAPD patients, 16 HD patients and 4 healthy adults were included and both the hemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) groups were matched. We measured predialysis serum levels of sPLA2, C-reactive protein, albumin, cholesterol, triglycerides and white blood cell count.

RESULTS CAPD patients had higher levels of serum sPLA2 than controls (median ± SEM, 308 ± 58.1 vs 56.9 ± 6.1 ng/dL; $p<0.05$) but patients in the HD group did not (111.3 ± 42.4 vs 56.9 ± 6.1 ng/dL; $p=0.53$). CAPD patients had higher levels of serum sPLA2 than HD patients (308 ± 58.1 vs 111.3 ± 42.4 ng/dL; $p<0.01$). There were no differences in serum sPLA2 levels between older (>40 y/o) and younger (<40 y/o) patients in each group and also no differences between DM and non-DM patients in each group. Additionally, there was correlation between serum sPLA2 and triglycerides in the CAPD group but no correlation between sPLA2 and CRP, albumin and cholesterol.

CONCLUSION Serum sPLA2 (a possible inflammatory marker) was higher in CAPD patients than in HD patients and its level was correlated with triglycerides. A large prospective study may be needed to clarify the significance of sPLA2 in dialysis patients.

Key word secretory phospholipase A2, inflammation, dialysis,