A NOVEL APPROACH TO CONTROLLING MARKERS OF METABOLIC SYNDROME IN END-STAGE RENAL DISEASE PATIENTS

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Purpose: Limited research has been published on hyperuricemia as a causal mechanism for metabolic syndrome in humans. Therefore, the purpose of this observational study was to explore effects on lipid values by intentionally lowering uric acid levels (SUA) in ESRD patients. **Methods**: All patients (N=12) presented with symptoms of gout and had severe hyperuricemia. Patients were prescribed 300 mg PO of allopurinol daily by their treating physician and were followed prospectively. Routine lab work for uric acid and lipid levels was performed prior to administration of allopurinol and at three months. Lipid measures measured were LDL-C, HDL-C, triglycerides, and total cholesterol. **Results**: Paired t-test revealed SUA levels decreased in participants from baseline (p=0.00036). Paired t-test also revealed LDL-C cholesterol decreased significantly (p=.0392) while triglycerides increased significantly (p=.0386). The trends observed in HDL-C and total cholesterol reflected a change toward an improved risk profile in the majority of the patients but was not significantly different. **Conclusions**: Findings reported by other authors using animal models suggest that using allopurinol to lower SUA levels may improve risk factors for metabolic syndrome. The present study demonstrated an improvement in LDL-C with positive trends in HDL–C and total cholesterol. The decrease in risk was mitigated by an increase in triglycerides. There were no reported side effects with the use of allopurinol. Additional research is warranted based on the present findings to explore the management of SUA as means to control lipids and risk for metabolic syndrome. This novel approach may help to improve mortality and morbidity associated with ESRD patients.