

Abstract

Aims: 1. Determination of AGEs (Advanced Glycation End products) in patients with various types of nephropathy. 2. Association AGEs with nutritional parameters and anemia. 3. Influence of renal parameters on sRAGE (soluble form of Receptor for Advanced Glycation End products) levels. 4. Technics and proceeding methods of the podocytes cultivation. 5. Determination of urine podocytes.

Methods: We determined fluorescent AGEs by spectrofluorometry, sRAGE by Enzyme-Linked ImmunoSorbent Assay (ELISA). Podocytes were passaged and identified immunocytochemically. Podocytes in urine were specified by flow cytometry method.

Results: 1. We did not find significant differences in AGEs serum levels among various types of nephropathy, even though the pathogenesis differs. 2. The albumin and prealbumin levels positively and haemoglobin levels negatively correlate with AGEs in patients with CKD grade 1-5, without necessity of dialysis. 3. Serum sRAGE levels are increased in patients with decreased renal function independently on the course of renal disease. 4. We implemented the methods and technics of podocyte cultivation. 5. Urine podocytes observation and confirmation that podocyturia relates to disease activity.

Conclusion: We confirmed that AGEs serum levels depend more on renal function than the type of nephropathy and are related to nutritional parameters and haemoglobin. We first demonstrated that serum sRAGE levels closely correlate with renal function. The correct cultivation technics of podocytes allows to use these cultures for further experiments. Podocyturia correlates with the disease activity.