Original Paper

Measurement of serum and 24-h urinary Glucose Amino Glycans as an diagnostic marker in early hypertention

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Abstract

Background & Objective: Glucose Amino Glycans (GAG) are unbranched polysacharides, major components of the basement membrane and play a key role in their molecular organization and function, also have an important role in the pathogenesis of some diseases such as hypertension. Hypertention is probably the most important health problem in several countries. But there is not yet a reliable indicator for early diagnosis of hypertension. The goal of this study was the measurement of serum and 24-h urinary GAG as an exact and early diagnostic marker.

Materials & Methods: In this case – control study, 24-h urine and serum samples collected from the 53 patients and 38 persons as matched control normotensive group. Then amount of GAG was measured with spectrophotometery method.

Results: Our findings showed that there is a direct relation between 24-h urinary GAG excretion and systolic blood pressure and it increases with increase of systolic blood pressure. Also amount of serum GAG increases in hypertensive patients in comparison with control group.

Conclusion: This study showed that the concentration of GAG in sera and 24-h of urine samples increase in systolic hypertention.

Key Words: Essential hypertension, 24-h urinary Glucose Amino Glycans, Spectrophotometery, Microalbuminurea

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