

A preliminary study of serum glycoconjugates in patients with chronic renal disease using Immobilized Frutalin

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In recent years it has become clear that carbohydrate portions of glycoconjugates are importance in numerous vital physiological processes in higher organisms. However, since glycobiology is a relatively new science, and carbohydrate structures are highly complex, the continuous development of novel analytical techniques is necessary to support the process of understanding the intricate nature of glycoconjugate structure and function. Plant lectins, due to their affinity for specific carbohydrates, are versatile tool to analyse glycoconjugates. In the present study was used immobilized frutalin, a-D-galactose binding lectin, in Sepharose 4B to isolate of serum glycoproteins of the patients with renal chronic disease. We show a simple method to analyze human serum glycoproteins of chronic renal patients using frutalin-Sepharose chromatography and one-dimensional polyacrylamide gel electrophoresis (PAGE-SDS). Glycoproteins of the serum were isolated by affinity chromatography on Frutalin-Sepharose. The retained glycoproteins (peak two) were subjected to PAGE-SDS. The electrophoresis profiles showed a specific band with Mr of the 49 kDa, that only patients wich chronic renal disease. Presented, this band is absent in the control group. The renal patients band suggesting a possible biomarker to diagnosis of chronic renal disease.

Keywords: Frutalin, glycoproteins, chronic renal disease

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