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## Peculiarities of proteinuria in the early period of experimental diabetes

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Proteinuria was considered to be the evidence of a long existing kidney damage with already irreversible changes, confirming the degree of glomerular destruction in case of diabetes mellitus (DM). Recent scientific information demands reassessment of the micro/macroalbuminuria meaning in the context of the pathogenesis of diabetic kidney disease (DKD). Considering the multifactoriality of renal impairment mechanisms in case of DM and the importance of their identification at the initial stages of the disease, the objective of this research was to clarify the peculiarities of proteinuria in the early period of alloxan-induced experimental DM. On 11th day after DM induction in white non-linear male rats urine samples of diabetic and control animals were collected under 2 hours-water diuresis condition for further study. As the results of the investigation demonstrated, the protein content in urine of diabetic animals markedly exceeded the control values. The significant augmentation of protein excretion was observed as well, including that standardized in 100  $\mu$ L of glomerular filtrate. Developing against the background of marked renal hyperfiltration, the total protein loss resulted mainly from an increase of GFR with raised filtration loading of the nephron. Thereby, an overloading phenomenon develops for transport reabsorption systems in proximal tubules accompanied by their intactness. Thus, the character and dynamics of proteinuria evidences mainly the functional origin of renal disorders on the 11th day of experimental diabetes in the absence of significant structural changes in the tubular apparatus of the kidneys.

### Biography

Olenovych Olha is an Associate Professor in the Department of Clinical Immunology, Allergology and Endocrinology in HSEEU, Bukovinian State Medical University, Chernivtsi, Ukraine). She has achieved the specialty certificate in Endocrinology in 2003 and completed her PhD degree in Endocrinology in 2005. She specializes in the study of kidney functions in case of endocrine pathology and her current field of scientific interest is diabetic kidney disease. She has published more than 49 papers in reputed journals and has been a speaker in national and international conferences.

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