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Tamm-Horsfall protein in patients with kidney damage and diabetes.

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Tamm-Horsfall protein (THP) is a glycoprotein present abundantly in human urine. It is localized in the thick ascending limb of the loop of Henle (TAL) and the early distal convoluted tubule (DCT). The rate of urinary excretion of THP has been studied in various diabetic groups. It has been postulated that urinary THP may be a useful marker for renal damage. The aim of this study was to compare directly the immunogold localization of THP in diabetic and control kidney tissue specimens with or without kidney damage. Immunogold labeling was performed on archival tissue samples of 34 diabetic and 18 control human kidneys at the light microscope level. Slides were ranked as having a high, moderate or low degree of reaction. The majority of diabetic samples had a slightly lower degree of THP, while patients with known renal dysfunction had lowest THP. Previous studies have found a decreased excretion of urinary THP in diabetics. Our results show that decreased gold labeling is associated with known renal damage and may indicate damage to the thick ascending limb of the loop of Henle and the early distal convoluted tubule, irrespective of presence or absence of diabetes.

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