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Diabetic nephropathy – an update

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Diabetic nephropathy is characterized by the development of albuminuria >300 mg/24 h and progressive deterioration of glomerular filtration rate in the setting of long-standing diabetes. Typically, patients are hypertensive and most importantly there is an increased risk for cardiovascular events and mortality. Besides its diagnostic role, recent studies have demonstrated that albuminuria is not only predictive of increased mortality risk in a linear manner but also of increased risk for end-stage renal disease. Furthermore, lowering of albuminuria has been shown to be associated with a protective effect underscoring the importance of albuminuria as biomarker for diabetic nephropathy. In addition to adequate treatment of hyperglycemia and blood pressure control, nephroprotection can be conferred by the use of renin-angiotensin-system blockers and is indicated by lowering of albuminuria. Currently, inhibitors of the sodium-glucose-transporter 2 (SGLT2) emerge as a new and additive treatment that has been shown to both prevent cardiovascular events and disease progression in patients with established diabetic nephropathy. Treatment with SGLT2 inhibitors on top of renin-angiotensin-system blockers further reduced albuminuria which can be explained by lowering of intraglomerular pressure. In addition to SGLT2 inhibitors, agonists of glucagon-like peptide 1 receptor have been shown to lower albuminuria as well and might have a nephroprotective potential, however, evidence from clinical studies with renal end points are lacking.

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