

DIABETES

Risk of kidney disease in T1DM

Patients with type 1 diabetes mellitus (T1DM) are known to be at risk of kidney complications; however, as life expectancy has been poor in these patients, the extent of the burden of kidney disease has been unclear. A new study has examined the 50-year cumulative risk of kidney complications in patients diagnosed with T1DM during childhood.

“The Pittsburgh Epidemiology of Diabetes Complications (EDC) study, which was initiated by Trevor Orchard in 1986 and has followed individuals with T1DM for more than 25 years, provided a unique opportunity to examine the incidence of kidney disease among people who have had T1DM for as long as 50 years,” explains corresponding author Tina Costacou.

The analysis included 932 patients, and the researchers assessed the cumulative incidence of microalbuminuria, macroalbuminuria and end-stage renal disease (ESRD) at 10-year intervals of disease duration. The incidence of complications was also compared by calendar year of disease onset (1950–1964 versus 1965–1980).

By 30 years of disease duration, >65% of participants in the 1950–1964 cohort had microalbuminuria, >43% had macroalbuminuria and >34% had ESRD. By 50 years of disease duration, these figures had increased to 88%, >71% and >61%, respectively. “The most significant finding is that some degree of kidney disease continues to affect the vast majority of patients

with T1DM at long durations,” says Costacou. “Thus, although the rates of renal failure have declined over time, this improvement appears to reflect better management of kidney disease and certainly not kidney disease prevention.”

Costacou suggests that more research needs to be done to identify additional risk factors for kidney disease in patients with T1DM, so that strategies can be developed to reduce the development of kidney disease in this group of patients.

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ORIGINAL ARTICLE Costacou, T. & Orchard, T. J. Cumulative kidney complication risk by 50 years of type 1 diabetes: the effects of sex, age, and calendar year at onset. *Diabetes Care* <http://doi.org/10.2337/dc17-1118> (2017)