Examination and in all patients by a P-300 analysis. From this study it would appear that relatively complex tasks are affected, which is in line with the literature we reviewed. However, suggestive as they are, the data should be treated with caution as the experimental and control group differ in size and both are relatively small. Furthermore, one would like to know how metabolic control was achieved (diet and/or oral hypoglycaemic drugs). As it stands the results seem to be of a preliminary nature but point to the possibility that careful analysis will reveal cognitive dysfunction also in younger patients suffering from NIDDM.

Sincerely yours,
G.J. Biessels, B. Bravenboer, W.H. Gispen

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Monitoring kidney function in diabetic nephropathy

Dear Sir,

Dr. P. Rossing and colleagues [1] have once again highlighted the imprecision of derived measurements of the glomerular filtration rate (GFR) when compared to the plasma clearance of $^{51}\text{CrEDTA}$. In clinical practice creatinine clearance is the usual method of assessing GFR despite the well-known disadvantages of this measurement [2]. Blood pressure reduction and dietary protein intake restriction have been shown to retard the rate of decline of GFR in diabetic nephropathy [3, 4] but the effects of these interventions are heterogeneous and in the latter intervention those gaining no benefit should not continue with this difficult dietary modification. Assessing whether a low protein diet (LPD) is retarding the rate of decline of GFR in an individual patient cannot be achieved using creatinine clearance as the data below demonstrate.

Nineteen insulin-dependent diabetic patients with nephropathy were studied prospectively for 29 (12–39) months on a normal protein diet (NPD) and subsequently for 33 (12–49) months on an LPD [4]. The creatinine clearance and the plasma clearance of $^{51}\text{CrEDTA}$ were performed within 8 h of each other in each patient on four (1–7) occasions on NPD and five (2–8) occasions on LPD. Creatinine clearance overestimated the plasma clearance of $^{51}\text{CrEDTA}$ by a mean of $5.8 \text{ ml} \cdot \text{min}^{-1} \cdot 1.73 \text{ m}^{-2}$ on NPD (Fig. 1) and $5.3 \text{ ml} \cdot \text{min}^{-1} \cdot 1.73 \text{ m}^{-2}$ on LPD (Fig. 2). The limits of agreements were wider on NPD (28 to $-40 \text{ ml} \cdot \text{min}^{-1} \cdot 1.73 \text{ m}^{-2}$) than on LPD (19 to $-30 \text{ ml} \cdot \text{min}^{-1} \cdot 1.73 \text{ m}^{-2}$).

These data reinforce the points made by Dr. Rossing. Derived measures of GFR are imprecise and unacceptable for monitoring response to a therapeutic intervention in an individual patient. Thus, in both the clinical and experimental setting isotopic clearance methods should be employed in the measurement of this important clinical parameter.

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Fig. 1. (see text)

Fig. 2. (see text)

Yours sincerely,

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