Increasing Incidence of Diabetic Nephropathy in Spain

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Dear Sir,

In recent years there has been a substantial increase in the incidence of patients starting renal replacement therapy due to diabetic nephropathy all over the world. The prevalence of diabetes in the dialysis population, as reported by the EDTA Registry [1, 2], seems to be lower if compared to the report of the United States Renal Data System (USRDS) [3]. Although the EDTA Registry recently documented an increasing incidence and prevalence of end-stage renal failure from diabetic nephropathy, some epi-demiological studies suggest that this recent higher incidence may be surpassed by the reality [4]. Furthermore, current registries provide information only on the number of diabetic patients with end-stage renal failure; more detailed information on the incidence of diabetic nephropathy with incipient renal failure is currently not available.

The Nephrology Service of Hospital Infanta Cristina in Badajoz serves a population of approximately 650,000. In the time span between 1.1.90 and 31.12.94, the outpatient clinic and the renal ward had 1,717 admissions for evaluation of renal illness, 166 due to diabetic nephropathy (9.7% of total). Twelve (7.2%) were type I diabetics (mean age 29.9 ± 6.2 years) and 154 were type II diabetics (mean age 63.4 ± 9.8 years). The annual incidence increased from 41.5/million in 1990 to 61.5/million in 1994. In parallel, 286 patients were admitted for renal replacement therapy, i.e. 88/million/year. Of this group, 60 patients had diabetes: type I, 8 patients (13.3%, mean age 35.7 ± 6.4); type II, 52 patients (86.7%, mean age 66.0 ± 6.6 years). This corresponds to an admission rate for dialysis of 18.5/million/year (19.6% of all patients), with a increasing incidence rate from 13.8/million in 1990 to 23.1/million in 1994. Spain has a rather similar acceptance rate for renal replacement therapy in diabetic patients than France, Italy or the Netherlands as suggested by the data of the EDTA Registry [1,2]. As explained above, this is a low incidence rate, approximately 8.5/million/year (13.5% of all patients, being the acceptance rate of new patients 63.0/million/year). Therefore, the figures are substantially higher than those reported by the EDTA Registry for Spain either for nondiabetic or diabetic new patients admitted for renal replacement therapy [1, 2].

Furthermore, although the true incidence of diabetes is more than twofold greater than the previously reported incidence by the EDTA Registry for Spain, it is sixfold greater than the figure recorded by the Registro de la Sociedad Española de Nefrología for our region (Extremadura), namely 2.7/million/year [5].

It has been suggested that the 'epidemic' of diabetic nephropathy may be related to economic development and population aging, as has been shown in former East Germany [6]. Also in Spain, the prevalence of type II diabetes has grown in a similar fashion as in other European countries (0.33% in 1964, 1% in 1978, 3.1% in 1983, up to 3.8% in 1991) [7], and currently the Spanish prevalence rate of diabetes mellitus is very near to the North Europe prevalence rate (4.5% of general population) [6, 8].

As would be expected, we have found a major contribution of type II diabetes mellitus to the increased number of patients commencing dialysis for diabetic nephropathy. The experience in several countries confirms that at least twice as many new patients with diabetes end-stage renal failure are type II as type I [9, 10]. Additionally, the survival of patients with type II diabetes mellitus has undoubtedly improved in recent years. In particular, there has been a constant improvement of 10-year survival in the type II patient with proteinuria [11].

Although the results of this study dwarfed the incidence rates reported by the EDTA Registry, this is a lower incidence than that reported by a recent epidemiological study in Germany which found an incidence rate of diabetic nephropathy of 132/ million/year and an incidence rate of end-stage renal failure of 52/ million/year [4]. However, the rates of incidence and prevalence of renal failure due to diabetic nephropathy found in this study still seem to be lower than those of other developed European countries. In spite of this, a trend toward an increase of these figures in the latter years is discernible. Future reports on the incidence of diabetic nephropathy in Spain and in the rest of Europe may help to shed light on this question.

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