NEFROLOGÍA. Vol. XXIV. Número Extraordinario (I). 2004

Microalbuminuria, una clave para las complicaciones diabéticas y su tratamiento

C. E. Mogensen
Aarhus Kommune Hospital. Aarhus. Denmark.

BACKGROUND

Over the past 20 years, there has been a remarkable increase in the number of patients with diabetes entering end-stage renal failure programmes with the need for dialysis.

This can partly be explained by the increasing number of people with type 2 diabetes due to the «diabetes epidemic», but also due to the fact that many patients survive longer these days.

Several reviewers indicate that blood pressure is not effectively controlled in diabetic patients.

THE CONCEPT OF MICROALBUMINURIA AS AN INITIAL STAGE OF DIABETIC RENAL DISEASE

Microalbuminuria is now widely accepted as the first laboratory sign of renal disease in diabetes, both type 1 and type 2. Obviously, in type 2 there may be competing reasons for the appearance of microalbuminuria, e.g. elevated blood pressure, which is quite common in patients with type 2 diabetes. It has been confirmed in many studies, latest in the UKPDS, that microalbuminuria predicts worsening of renal disease and also early mortality. Microalbuminuria is associated with all cardiovascular complications, including retinopathy.

OVERT NEPHROPATHY, INCREASING BLOOD PRESSURE

Overt nephropathy is characterised by proteinuria with subsequent rapid decline in GFR if diabetes and hypertension is not well controlled. When patients are about to enter the stage of proteinuria, GFR is usually rather well-preserved so therefore it is important to find patients early on to protect them against a decline in renal function, by *screening* for microalbuminuria.

THE RENIN ANGIOTENSIN SYSTEM IN DIABETES

The concept of blocking the renin angiotensin system in diabetes is a key concept in the management of patients. In all stages of diabetic renal involvement, blocking the renin angiotensin system reduces the rate of progression. New studies in type 2 diabetes document that using angiotensin receptor blockers (ARBs) significantly reduce the risk of end-stage renal failure with patients with type 2 diabetes. Many studies show that intervention in the stage of microalbuminuria is very efficient in reducing albuminuria and probably preserving renal function.

When proteinuria is documented, the rate of decline in GFR may be reduced, but not completely normalised, and unfortunately, these patients will still have a poor prognosis, even with treatment. Therefore, it is important to screen patients for microalbuminuria and treat them early on. New studies document that so-called dual blockade is efficacious in reducing blood pressure and slowing the progression of renal involvement, not only in diabetes, but also in non-diabetic renal involvement.

CONCLUSION

The key issue is to obtain the best possible glycemic control in diabetes and to normalize blood pressure, usually by blocking the renin angiotensin system, often in combination with diuretics and other antihypertensive agents. *Screening* for microalbuminuria is essential in identifying at risk patients. In this way, the clinical course of complications can be considerably ameliorated and the need to renal and cordial supportive treatment may be postponed considerably.

A general goal may be a BP below 130-120/70-80 mmHg —the lower, the better.