Proteinuria and Hypertension in Autosomal Dominant Polycystic Kidney Disease

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Dear Sir,

The prevalence of proteinuria in primary established hypertension was found to be between 10 and 20%. In autosomal dominant polycystic kidney disease (ADPKD) mild to moderate proteinuria has been observed in patients with advanced renal failure [1-3] or more infrequently as a consequence of superimposed glomerular disease. We studied retrospectively 31 young and middle-aged ADPKD patients (13 normotensive and 18 hypertensive) with normal renal function. The mean age was 32 years (range from 19 to 45 years). All hypertensive patients underwent treatment with angiotensin-converting enzyme inhibitors. Before renal function deteriorated, 5 of the 18 treated hypertensive patients developed overt proteinuria (greater than 4 mg/kg/day), whereas it did not appear in the normotensive ones. The average proteinuria was 9.3 mg/kg/day (range from 5 to 12 mg/kg/day). Comparisons between arterial pressure values in the proteinuric and nonproteinuric groups were performed using a nonparametric test (the Wilcoxon two-sample test, i.e. U test), at 1 year and 2 years of follow-up. It was not possible to perform this test for basal data because there was only 1 case with proteinuria. However, this patient exhibited the highest value for systolic and diastolic pressure. As shown in table 1, there was a relationship between higher arterial pressure and the presence of proteinuria. The average systolic and diastolic pressures in the normotensive patients over the same follow-up period were 125 and 77 mg Hg, respectively.

It has been pointed out that proteinuria reflects both severer hypertension and target organ damage and is related to the risk of cardiovascular events in primary hypertension [4, 5]. In our ADPKD patients, proteinuria parallels the early rise in arterial pressure with inadequate control. Whether proteinuria identifies a high-risk group for premature cardiovascular events in this condition requires further studies.

Table 1. Average arterial pressure in proteinuric and nonproteinuric treated hypertensive ADPKD patients during follow-up

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<th>Basal</th>
<th>1 year</th>
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<td>Number of patients in parentheses</td>
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<td>n.d.</td>
<td>U test not performed because there is only 1 patient in the proteinuric group.</td>
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References

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