Evidence of Some Nonglomerular Bleeding in IgA Nephropathy

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Dear Sir,

Since Shichiri et al. [1] first described the use of the Coulter counter to examine the urinary red cell morphology in the diagnosis of the site of bleeding in patients with hematuria, we have been using this simple and inexpensive technique in the initial investigation of such patients.

Urinary red cell size distribution curves obtained from 30 patients with hematuria and biopsy-proven glomerulonephritis of various type have been collected to date. In our case material, glomerular diseases other than IgA nephropathy (n = 24) were invariably associated with the characteristic distribution curve of glomerular hematuria as defined by Shichiri et al. [1]. Of 6 patients with IgA nephropathy, 5 presented with the glomerular pattern of urinary red cell size distribution, but 1 patient showed a mixed distribution (fig. 1), resulting from the presence in the urine of two distinct populations of red blood cells which, according to Shichiri et al. [2], were regarded as being of glomerular and nonglomerular origin, respectively. This led to a very careful search for an urologic cause of bleeding in this patient which, however, was not found. A mixed pattern of glomerular and nonglomerular hematuria has already been reported in association with IgA nephropathy when the urinary sediment was examined by phase-contrast microscopy [3,4]. Though subjective variations in the evaluation of the extent and frequency of abnormal red cell morphology cannot be avoided, these findings would suggest that in this type of glomerulonephritis the entry of red blood cells in the glomerular filtrate is at least in part postglomerular [5]. Our present findings support further this possibility, since, different from the above-mentioned studies, they were obtained with a completely automated (and easily reproducible) technique.

To explain this, Fairley and Birch [3] suggest that vascular lesions might be present in the mucosa of the

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Fig. 1. Urinary red cell size distribution curve in a patient with hematuria and IgA nephropathy. urinary tract in patients with IgA nephropathy which could account for some nonglomerular bleeding in this type of glomerulonephritis.

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