Improved Renal Perfusion Prevents Disease Progression in Focal Segmental Glomerulosclerosis

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Table 1. Comparison of intrarenal hemodynamics between the pre- and posttreatment in 7 patients treated with vasodilators

Dear Sir,

Nephrosis associated with focal segmental glomerulosclerosis (FSGS) is considered to be refractory to treatment when associated with severe degree of renal dysfunctions such as a marked reduction of glomerular filtration rate and tubular dysfunction in relevant to its ability to concentrate, acidify and transport solutes [1-3]. In addition, marked alterations of intrarenal hemodynamics with the characteristics of severely reduced renal plasma flow, peritubular capillary blood flow and of elevated intrarenal resistances are also noted in this specific group of patients [3-4]. These findings represent an imbalanced state of inadequate production of endothelium-dependent relaxing factor(s) in the phase of enhanced supply of vasoconstrictor(s) due to glomerular endothelial dysfunction [5]. Thus, this renal hypoperfusion state implicates that treatment with vasodilators to improve the renal perfusion should be a logical approach.

Pertaining to this view, 7 nephrotics with a severe form of FSGS had treatment combinations with a calcium-channel blocker (isradipine 2.5-10 mg/day), an angiotensin-converting enzyme inhibitor (cilazapril 2.5-10 mg/day), dipyridamole 5-15 mg/kg/day, heparin 50-75 U/kg i.v. for 3-6 weeks, and prednisolone 1-2 mg/kg/day during nephrosis. After a period of 55 months, 6 of 7 patients so treated had shown a progressive improvement in renal functions as well as the intrarenal hemodynamics (table 1). In contrast, all 8 nephrotics with severe FSGS entered end-stage renal disease after 62 months of treatment with prednisolone, cyclophosphamide and antihypertensive agents such as re-serpine, hydralazine and diuretics.

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