New insight into the pathogenesis of nephrotic syndrome and focal segmental glomerulosclerosis

Following the Shalhoub’s hypothesis in 1974, several studies have tried to identify circulating cytokines produced by a modified T lymphocyte clone, able to alter the GBM permselectivity leading to fully developed nephrotic syndrome. Several circulating factors have been implicated, including IL-1, IL-2, IL-8, SIRS, VEGF and the glomerular permeability factor described by Savin. However, none of them is of completely convincing evidence. On the other hand, the last year was rich in very interesting reports concerning a possible role of podocyte molecules expressed on the cell surface or in the cytoskeletal structure, which are likely to play a crucial role not only in congenital or familial nephrotic syndrome, but also in steroid-resistant forms. Old concepts and new hypotheses are discussed looking for an unifying theory. (Giorn It Nefrol 2001; 18: 9-13)

KEY WORDS: Minimal change disease, Focal segmental glomerulosclerosis, Nephrotic syndrome pathogenesis, Podocyte, Vascular permeability factors