

라 모두 진행되었으나 lovastatin 투여군이 단순 신증후군 유발군 보다 경화도의 단계별 변화에서 현저한 감소를 보였다.

4) 신동맥 Microfil 관류 소견상 단순 신증후군보다 lovastatin 투여군에서 엽간 및 소엽간 세동맥의 분절과 엽전 발생 부위가 적었고 사구체 모세혈관망의 결손도 적게 관찰되었다.

이상의 결과로 보아서 신증후군에서 고지혈증은 사구체 경화증의 하나의 중요한 원인 요소로 생각되며 효과적인 지질대사 개선제는 고지혈증에 의한 진행성 사구체 경화성 변화를 경감시킬 수 있는 것으로 사료된다.

— 27 —

### **Studies on the Role of Interleukin-4 and FcεR II in the Pathogenesis of Minimal Change Nephrotic Syndrome**

**Byoung-Soo Cho, M.D. and Chang-II Ahn, M.D.**

*Department of Pediatrics, Kyung Hee University  
College of Medicine, Seoul, Korea*

**Choong-Eun Lee, Ph.D. and Kwang-Ho Pyun, M.D.**

*Genetic Engineering Research Institute,  
KIST, Seoul, Korea*

Minimal change nephrotic syndrome (MCNS) has been often associated with elevated IgE levels and referred to involve immune dysfunction. We investigated the role of interleukin-4 (IL-4) in the pathogenesis of MCNS through the regulation of membrane FcεR II, low affinity receptor for IgE, expressed on B-cells. A significantly higher expression of membrane FcεR II was found on fresh B-cells of MCNS (N=18) than on those of normals, as analyzed by fluorescence activated cell scanner by double antibody staining with anti Leu 16 (pan B marker)-FITC AND ANTI Leu 20 (FcεR II)-phycoerythrin.

Sera from these patients also demonstrated increased IL-4 activity as compared with those of normal subjects. We observed that nephrotic T-cells has a greater ability (up to 9 fold) than normal cells

to produce IL-4 (5~100 U/ml) to effectively induce FcεR II expression (up to 6 fold). These results suggest that MCNS may be a T-cell disorder involving abnormal production of IL-4 and that the counter-regulation of FcεR II by IL-4 lplay an important role in pathogenesis of MCNS.

— 28 —

### **Brush Border Deficiency of renal Proximal Tubule in Idiopathic Fanconi Syndrome (Clinico-Pathological Correlation Presentation)**

**Ko, K.W., Chi, J.G., Lee, H.S. and Kang, S.H.**

*Department of Pediatrics and Pathology,  
Seoul National University Children's Hospital*

Clinicopathological correlation of idiopathic Fanconi syndrome was assessed in 36/12 year old girl.

The case was characterized by hyperchloremic metabolic acidosis (Cl 114 mEq/L, pH 7.29, pCO<sub>2</sub> 16 mmHg, HCO<sub>3</sub> 8 mEq/L), renal glycosuria (FBS 74 mg%, urine glucose (III) with 196 mg%), hypophosphatemic rickets (P 2.3 mg%, FEPO, 32.4%, flared, frayed and cupped epiphyses of radius and ulna), hypouricemia (uric acid 2.0 mg%), hypokalemia with K wasting (2.9 mEq/L, FE K 60.7%) and renal aminoaciduria.

Further work up on functional study of renal tubule revealed proximal tubular acidosis, evidenced by 21.2% of FEHCO<sub>3</sub>, 54 mmHg of (U-P) pCO<sub>2</sub> and 5.0 of urine pll.

In autopsy specimen, pronounced deficiency or lack of brush border of renal proximal tubule and effaced microvilli as well as segmental thickening of tubular membrane, hitherto unreported, were notably found. thickening of tubular membrane, hitherto unreported, were notable found.