

## Gitelman 증후군에서 동반된 신증후군

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### Gitelman Syndrome Accompanied by Nephrotic Syndrome

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**Introduction :** The typical symptoms of Gitelman syndrome are hypokalemia and metabolic alkalosis associated with hyperreninemia via NaCl cotransporter dysfunction in renal distal tubule. This syndrome has a tendency to show only tubulopathy but several cases have been reported with the concomitant glomerulopathy. We present the Gitelman syndrome with the concomitant minimal change nephrotic syndrome, confirmed with gene study.

**Case :** A 2 year old male child was admitted for a 10 days history of generalized edema. Urinalysis showed nephrotic range proteinuria. Blood chemistry test showed hypoalbuminemia (1.1 g/dL), high cholesterol (490 mg/dL) and high triglyceride (641 mg/dL). Complement test was normal C3 and C4. Since the 1st admission, he has shown one or two times relapse every year. He was diagnosed as a typical steroid dependent nephrotic syndrome. His electrolytes were hypokalemia and metabolic alkalosis. Hypokalemia was not correlated with prednisolone administration. Blood renin and aldosterone level were high renin (42.9 ng/dL) and normal aldosterone (2.6 ng/dL). There were normal serum magnesium (2.2 mg/dL) and hypocalciuria (UCa/Cr 0.08%). T3, FT4 and TSH value were within normal limits. Gitelman syndrome was confirmed with SLC12A3 gene DNA analysis. He had a compound heterozygous mutation on SLC12A3 gene.

**Conclusion :** We suggest that there should be a need for studying the relationship between proteinuria and SLC12A3 gene.

**Key Words :** 지텔만증후군, 신증후군

Gitelman syndrome, Nephrotic syndrome