

24시간 단백뇨와 사구체 여과율로 측정된 신장기능의 혈청 빌리루빈과의 관계

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Relationship of Serum Bilirubin Concentrations to Kidney Function Measured using Abbreviated MDRD Equation and Albuminuria Measured using 24 Hour Urine Albumin in Adults

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Background: Information on the association of serum bilirubin concentrations with kidney function and albuminuria is limited and controversial. The association of serum bilirubin concentrations with kidney function and albuminuria have not been established in the Korean adult population.

Methods: We performed cross-sectional analysis during a 10-year period from January 2000 to December 2009 at Kosin University Gospel Hospital (Busan, Republic of Korea), and evaluated the relationships between serum bilirubin concentrations with estimated glomerular filtration rate (eGFR) and the degree of urinary albumin excretion in 4803 adults aged 18 years or older. As a surrogate for the renal function of the subjects, we estimated the GFR by using the abbreviated Modification of Renal Disease (MDRD) equation. Urinary albumin excretion was measured using 24 hour urine albumin.

Results: An eGFR <60 mL/min/1.73m² and 24 hour urine albumin ≥ 150 mg/day were present in 26.8% (n=1,292) and 43.6% (n=2,095) of subjects, respectively.

A serum total bilirubin concentration >1.2 mg/dL and Fasting glucose level >125 mg/dL were present in 11.3% (n=544) and 21% (n=1,012) of subjects, respectively. After adjustment for demographics, comorbidities and other laboratory measures, total serum bilirubin was positively associated with eGFR, and negatively with albuminuria.

Conclusion: Our study shows that serum bilirubin was positively associated with eGFR, and negatively with albuminuria in the Korean adults.

Key Words: 알부민뇨, 빌리루빈, 예측된 사구체 여과율

Albuminuria, Bilirubin, Estimated glomerular filtration rate