

혈청 빌리루빈의 신기능 및 24시간 단백뇨와의 상관성

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Relationship of Serum Bilirubin Concentration to Kidney Function and 24-Hour Urine Protein in Korean Adults

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Background: The relationships among serum bilirubin concentration, kidney function and proteinuria have yet to be fully elucidated, nor have these relationships been investigated in Korean adults.

Methods: We retrospectively reviewed the medical records of Korean adults who were evaluated at Kosin University Gospel Hospital (Busan, Republic of Korea) during a five-year period from January 2005 to December 2009. We evaluated the relationships among serum bilirubin concentration, estimated glomerular filtration rate (eGFR) and 24-hour urinary protein excretion in a sample of 1363 Korean adults aged 18 years or older.

Results: The values of eGFR <60 mL/min/1.73m² and 24-hour urine albumin ≥ 150 mg/day were observed in 26.1% (n=356) and 40.5% (n=553) of subjects, respectively. Fasting glucose levels ≥ 126 mg/dL were observed in 44.9% (n=612) of the total sample. After adjustment for potential confounding factors including demographic characteristics, comorbidities and other laboratory measures, total serum bilirubin was positively associated with eGFR and negatively associated with proteinuria both in the whole cohort and in a subgroup of diabetic individuals.

Conclusion: To our knowledge, this is the first hospital-based study specifically aimed at examining the relationships among serum total bilirubin concentration, 24-hour urine protein and kidney function in Korean adults. We demonstrated that serum total bilirubin concentration was negatively correlated with 24-hour urine protein and positively correlated with eGFR in Korean non-diabetic and diabetic adults.

Key Words: 단백뇨, 빌리루빈, 사구체여과율

Proteinuria, Bilirubin, Glomerular filtration rate