

소아 및 요로감염, 급성신우신염, 방광요관역류, 신반흔 환아에서 미세알부민뇨의 유병률 및 의의

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Microalbuminuria in General Population in Children and Children with Urinary Tract Infection, Acute Pyelonephritis, Vesicoureteral Reflux, or Renal Scar

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Purpose : Microalbuminuria is known as a predictor of clinical nephropathy in patients with diabetes mellitus and a risk factor of cardiomyopathy and nephropathy in general population in adults. No study has yet investigated microalbuminuria in children and the validity of prescreening by albumin measurement in spot urine sample to identify in children with urinary tract infection(UTI), acute pyelonephritis (APN), vesicoureteral reflux (VUR), or renal scar. Therefore we tested the incidence of microalbuminuria in general population in children and predictability of urinary albumin concentration (UAC) and albumin-creatinine ratio (ACR) in spot urine samples for complications in children with urinary tract infection (UTI).

Methods : From July 2007 to June 2008, we evaluated age, height, weight, blood pressure, glucose, serum creatinine, spot urine creatinine, spot urine microalbumin in pediatric patients and patients with urologic diseases who were admitted to Konkuk University Hospital. We compared urinary albumin concentration (UAC) and albumin-creatinine ratio (ACR) in spot urine samples with age, height, weight, blood pressure, glucose, serum creatinine, glomerular filtration rate (GFR).

Results : A total of 223 patients were enrolled. Mean urinary albumin concentration (UAC) was 3.52 mg/dL, and albumin-creatinine ratio(ACR) was 2.28 mcg/mg. ACR showed a correlation to age ($r=-0.275$), height ($r=-0.304$), weight ($r=-0.259$), blood pressure ($r=-0.146$), glucose ($r=-0.037$), serum creatinine ($r=-0.207$), glomerular filtration rate (GFR) ($r=-0.184$). Urinary albumin concentration (UAC) showed no correlation.

Conclusion: Albumin-creatinine ratio (ACR) showed a correlation to age, height, weight, blood pressure, glucose, serum creatinine, glomerular filtration rate (GFR). No correlation between albumin-creatinine ratio (ACR) and vesicoureteral reflux (VUR), renal scar in patients with urologic disease. Further study will be needed about predictability of microalbumin in pediatric patients.

Key Words : 미세알부민뇨, 소아, 요로감염

Microalbuminuria, Children, Urinary tract infection (UTI)