

발열성 요로 감염 환자에서 발견된 수신증의 임상적 의의

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The Impact of Hydronephrosis on Febrile Urinary Tract Infection

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Purpose : Hydronephrosis is found about 30% of children with urinary tract infection (UTI). It can be caused by various conditions, although most childhood hydronephrosis is congenital. This study was performed to investigate the relationship between febrile UTI and hydronephrosis.

Methods : We reviewed retrospectively the medical charts of 183 patients diagnosed as UTI between January 2007 and May 2009 at Korea University Guro Hospital. Inclusion criteria were as followings; 1) fever more than 37.5°C defined as an axillary temperature 2) positive urine culture (pure growth of $>10^5$ organisms/mL on a catheter or suprapubic specimen of urine), 3) no history of urinary tract anomaly on antenatal sonography, and 4) no previous history of UTI. We classified the enrolled children into two groups of patients with hydronephrosis (HN) and those without hydronephrosis (NHN).

Results : Among 183 patients with febrile UTIs, male to female ratio was 2:1 and mean ages were 10.1 months. The 79 patients were HN and 101 patients NHN. Hydronephrosis was found in 56 patients with left kidney, 9 right and 14 both kidneys. Most of hydronephrosis were grade I/IV (76 patients). Compared with NHN group, initial renal cortical defects on DMSA scan significantly increased in HN group (HN 37.5%, NHN 16.8%, $p < 0.05$). The incidence of VUR was not different between the two groups (HN 20.9%, NHN 12.1%). White blood cell counts, c-reactive protein and fever-subside duration after antibiotics' use were not different between the two groups. Follow-up DMSA scan (about 6 months later after UTI) showed no difference of renal scarring in both two groups (HN 22.2%, NHN 15.4%).

Conclusion : Our data suggests that hydronephrosis in febrile UTI patients is clinically useful for detecting renal cortical defects, but is not associated with flow-up renal scar.

Key Words : 요로 감염, 수신증, 신결손

Urinary tract infection, Hydronephrosis, Renal cortical defect