

저체중출생아로 태어난 요로감염 환자에서 증가된 신 위험도

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Low Birth Weight Increases Renal Risks in Children with Urinary Tract Infections

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Objective : Recent epidemiological and experimental data suggest that cardiovascular and renal risks in adult life are affected by certain factors during the perinatal period. Among these, it is well known that low birth weight (LBW) is associated with an increased risk for renal disease. The goal of this study was to determine whether LBW was associated with the development and progression of UTIs and primary VUR.

Patients and Methods : The medical records of 233 UTI patients without other genitourinary anomalies except VUR were reviewed retrospectively. We investigated whether LBW was related with the development of the UTI, VUR, renal defects, subsequent renal scars, and the presence of hydronephrosis, infective organisms.

Results : Among 233 patients with UTIs, 21 were LBW and 212 had a normal birth weight (NBW) at delivery. Seventy six out of the 176 patients with UTIs who had a VCUG, had primary VUR. Among them, 15 were patients with LBW and 61 were NBW. For the LBW group with UTIs there was a significant increase in the frequency of VUR compared to the NBW group with UTIs (71.4% vs 38.9%, $p<0.05$). For the LBW group with UTIs, the frequency of initial renal defects (81% vs. 36.3%, $p<0.01$) and renal scars (94.1% vs. 46.3%, $p<0.01$) were increased on DMSA. In addition, for the LBW group with UTIs and VUR, the frequency of the development of initial renal defects (100% vs. 59.0%, $p<0.05$) and renal scars (100% vs. 57.1%, $p<0.05$) was also increased. However, there were no differences in the VUR grade and the presence of hydronephrosis between the LBW and NBW groups with UTIs.

Conclusion : The results of this study showed that patients with UTIs and LBW were at higher risk for VUR, acute pyelonephritis, and subsequent renal scarring. The development of acute pyelonephritis and the progression of renal scars were also increased in the patients with primary VUR and LBW. Therefore, awareness of the risks associated with LBW with UTI is important for the appropriate work up and management of these patients

Key Words : 요로감염, 저체중출생아, 방광요관역류

Urinary tract infection, Low birth weight, Vesicoureteral reflux