

1 세미만의 급성신우신염 환자에서 99mTc-DMSA 와 비교한 SPECT 영상의 비교

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Comparison of Tc-99m DMSA renal planar scan and SPECT for diagnosing acute pyelonephritis in infants under 1 year old

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Purpose : The aim of this study is to compare the sensitivity of Tc-99m DMSA renal SPECT with planar scan for the detection of renal cortical defects in infants with suspicious acute pyelonephritis under 1 year old. **Methods :** Sixty infants with fever and pyuria under 1 year old (4.0 ± 2.1 mo) were prospectively included. All infants underwent Tc-99m DMSA renal planar scan and SPECT at the same time within 7 days of hospitalization. The number of infants with positive result and the number of cortical defects were compared between Tc-99m DMSA renal planar scan and SPECT. **Results :** The 60 subjects forming the total study group were made up of 14 Female and 46 Male who ranged in age from 1 month to 1 year (mean age : 4 months, 4.01 ± 2.10). The days of Scan time between SPECT and antibiotics injection are 3.2 days. In individual analysis, the number of infants with cortical defect on SPECT was significantly higher than that on planar scan. Twenty one infants (35.0%) showed one or more cortical defects on planar scan, while 32 infants (53.3%) showed cortical defects on SPECT. The right kidney demonstrated defects in 0.45 ± 0.67 by SPECT and 0.25 ± 0.54 of these by planar. The left kidney demonstrated defects in 0.40 ± 0.81 cases with SPECT and 0.28 ± 0.69 of these with planar scintigraphy. In regional analysis, the number of cortical defects in both kidney on SPECT were significantly higher than that on planar scan scan (0.85 ± 0.97 vs. 0.53 ± 0.83). **Conclusion :** Tc-99m DMSA renal SPECT had higher sensitivity than planar scan for the detection of renal cortical defects in infants under 1 year old. Tc-99m DMSA renal SPECT is recommend in evaluating of infants with suspicious acute pyelonephritis.