

COMPARISON OF SCINTIGRAPHY WITH ^{99m}Tc-DMSA AND RENOGRAPHY WITH MAG-3/FO IN CHILDREN WITH PYELONEPHRITIS

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INTRODUCTION: Early detection of pyelonephritis is of great importance in order to prevent potentially serious consequences, as renal failure and hypertension. **PURPOSE:** Comparison between Mag-3/Fo renography (simultaneous furosemide administration) and ^{99m}Tc-DMSA renal scintigraphy in the detection of parenchymal lesions in children with urinary tract infection. **PATIENTS AND METHODS:** Seventeen children with pyelonephritic lesions detected by ^{99m}Tc-DMSA renal scintigraphy (9 males, 8 females, mean age + SD 24.0 + 36.9, range 0.5-122 months) were included in this study. Mag 3/Fo renography was performed two days later and comparison of the two methods, concerning anatomical findings and split function, was done. **RESULTS:** The DMSA study revealed lesions in 19/34 kidneys, while the Mag 3/Fo study in 13/19 kidneys (68.4%). Complete agreement of anatomic lesions occurred in 11 kidneys (57.9%) and partial in 2 kidneys (10.5%). The Mag 3/Fo study was normal in 6 children (31.6%), who had single kidney lesions by the ^{99m}Tc-DMSA scintigraphy. These 6 children had very limited lesions in the DMSA study; their mean age + SD was 4.8 + 2.3 months, whereas the remainder had a mean age + SD of 34.6 + 42.7 months. Difference of split function between the two methods was <3% in 10 children (58.8%), 3-5% in 4 children (23.5%) and >5% in 3 children (17.6%). The age range of the latter subgroup was 0.5-7 months. **CONCLUSION:** Preliminary results indicate good correlation of anatomical findings and split function in both methods, especially in older children.

