

THE VALUE OF Tc-99m-DMSA RENAL SCINTIGRAPHY IN CHILDREN WITH URINARY TRACT INFECTION (UTI)

Žeravica R, Ilinčić B, Čabarkapa V, Dujmović F, Babić Lj

Department of Nuclear Medicine, Clinical Center Novi Sad

Children with urinary tract infection continue to be an important part of the pediatric practice. Infection of the urinary tract is a risk for the damage of parenchyma and kidney function. It is the pediatrician's role to minimize damage caused by bacterial infection by early diagnosis and appropriate intervention.

AIM: The aim of the study was to evaluate the role of renal scintigraphy in monitoring pediatric urinary tract infection and to establish the correlation between urinary tract infection, vesicoureteric reflux, and renal scarring.

METHODS: We reviewed 189 infants with UTI aged 0-13 years, (40 male and 149 female), who were assessed by technetium 99m Tc-dimercaptosuccinic acid (DMSA) scan during a 3-year period (2002-2005). UTI was diagnosed on the basis of a positive urine culture. All patients underwent micturating cystourethrogram (MCU) and ultrasonography (US). VUR was diagnosed and graded by micturating cystourethrogram (MCU), and ultrasonography (US) was done to evaluate renal tract dilatation and other structural abnormalities. DMSA scan was performed approximately 6 months after UTI.

RESULTS: Abnormal DMSA renal scans were found in 35% children with UTI. The appearance of an abnormal DMSA renal scan is correlated with vesicoureteral reflux but not with age or sex.

CONCLUSION: DMSA renal scintigraphy is undoubtedly a valuable tool for pediatricians as a guide in giving appropriate antibiotic therapy and to prevent further renal damage.