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The relationship between urinary tract infection and vesicoureteral reflux in children from Eastern Galilee Region-Israel**Wael Nasser and Haia Nasser**

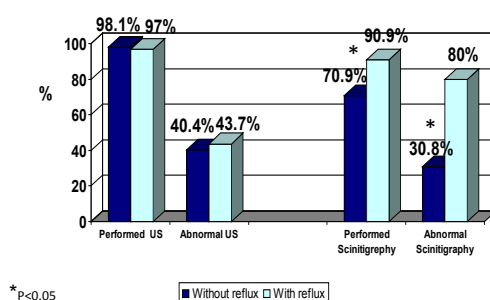
Baruch-Padeh Poriya Medical Center, Israel

Background & Aim: The incidence of vesicoureteral (VUR) in the general population is less than 1%. Reflux carries an increased risk of pyelonephritis and renal failure. The purpose of the current study was to check whether the voiding cystourethrography (VCUG) test is necessary in most cases of upper urinary tract infection (UTI) in children, and to investigate if there is a correlation between the presence of VUR and urinary tract infection, or the reflux is a random finding that does not require monitoring. We studied the correlation with various markers of inflammation, renal ultrasound findings (US), (DMSA) nuclear renal scans findings, and the clinical presentation.

Methods: The current study was based on tests taken at the Poriya Medical Center in Tiberius, between 2009 to 2013. The study includes 88 children up to 2 years that were asked for VCUG. All the children had symptoms of UTI. The children had laboratory tests (blood, urine, culture), then renal US. Older children did the voiding test after doing DMSA. DMSA was done 3-5 months after the acute UTI.

Results: Approximately 40% (37.5%) of patients suffered from reflux: 66.7% with incorrect DMSA (filling defect/scar) had reflux. Only 18.2 % of children with normal DMSA results had reflux. High inflammation factors levels (CRP, ESR) were found in all subjects with reflux, and only 52.6% of cases with positive reflux had low lymphocytes levels compared with only 14.3% in patients without reflux.

Conclusions: VCUG is not required in most cases of upper UTI. Suitable replacement test can be done by renal DMSA, which has also an added value of detecting a potential renal damage (scars). High levels of inflammation factors, erythrocyte sedimentation rate (ESR), and C-reactive protein (CRP) strongly suggest a possible existence of reflux. In contrast, lower levels deny the existence of reflux in children with upper UTI.

**Biography**

Wael Nasser is the Head of Pediatric Nephrology department at Baruch Padeh Poriya Medical Center. He is responsible for pediatric nephrology at Faculty of Medicine, Member of the Israeli Association of Nephrology, Israel Society of Pediatrics, and Israel Society of Hypertension. He has experience in research, evaluation, teaching and administration both in hospital and education institutions.

WNasser@poria.health.gov.il

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