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PROGNOSTIC FACTORS OF PERMANENT RENAL DAMAGE AFTER FIRST FEBRILE URINARY TRACT INFECTION

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Chronic pyelonephritis is an important cause of morbidity in adult age, responsible for chronic renal insufficiency and hypertension. We analysed clinical, biochemical and imaging parameters associated with definitive renal scarring after first episode of febrile urinary tract infection in population risk: children of 1-24 months.

MATERIAL AND METHODS: Prospective study of 383 children with first episode of febrile ITU, being analysed as predictor variables of permanent renal damage: age, sex, leucocytosis(>15000), CRP(> 20 mg/l), fever before treatment, ultrasonography and voiding cystourethrography. In patients with acute pyelonephritis in first DMSA, a repeated scan was performed a year later. The analysis of frequencies was accomplished through χ^2 test. The variables that resulted significant were included in a stepwise logistic regression.

RESULTS. 41 children (10,7%) showed permanent renal scarring. CRP, pathological renal ultrasonogram, reflux and degree of reflux were related significantly to presence of second altered DMSA ($p=0,004$, $p<0,001$ and $p<0,001$ respectively). The logistic regression model resulted highly predictive ($c261,7$; $4 p<0,001$), classifying correctly 90,2% of patients. Controlled for other variables, forecasted significantly the risk of permanent renal damage: high reflux(grades 4 and 5) OR 17,6 (CI 95% 4,3-72,6), small reflux(grades 1 to 3) OR 3,4 (CI 95% 1,5-7,4), CRP higher than 20 mg/l OR 3,4 (CI 95% 1,4-11,5) and abnormal echography OR 4,1(CI 95% 1,9-8,8).

CONCLUSIONS: We emphasize the importance of vesicoureteral reflux, especially of high degree, as factor associated with permanent renal damage and the predictive value of high CRP and pathological renal echography.

