

Inflammatory and oxidative status in neurogenic bladder children after meningocele

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ABSTRACT

Introduction: Neurogenic bladder (NB) most often is caused by meningocele (MMC) and manifests with various lower urinary tract dysfunctions. Condition of NB is worsened by inflammatory process or oxidative status imbalance.

Purpose: To estimate of urinary uric acid (UA), hs-CRP, thiol status in association with NB function in MMC patients.

Materials/Methods: 33 MMC children and 20 healthy individuals were included into the study. The first daytime urine samples were collected from all examined participants and urinary thiol status, hs CRP and UA were measured.

Results: MMC children presented higher urinary UA level. The median hs-CRP level were also higher in MMC patients compared to the reference.

Thiol status were lower in MMC individuals compared to reference group. We found positive correlation between serum creatinine, serum UA and urine creatinine and negative between serum creatinine and GFR. Correlations between urinary UA and physical development parameters, renal function, hsCRP, thiol status and urodynamic findings in MMC and reference groups were found.

Conclusions: UA is a marker potentially having direct effect on the bladder function. Disturbed oxidative status and increased markers of inflammation may be a potentially modifiable factors affecting function of lower urinary tract in MMC children.

Key words: uric acid, thiol status, C-reactive protein, urodynamics, bladder function
