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## THE ROLE OF MARKERS OF ACUTE INFLAMMATORY RESPONSE IN THE EARLY DIFFERENTIAL DIAGNOSIS OF MENINGITIS IN CHILDREN

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**Introduction:** The most common clinical option in the structure of enterovirus infection is serous meningitis, which accounts for up to 70% of all neuroinfections in children. Considering that at present, meningitis of enterovirus and bacterial etiology quite often have a similar clinical picture, since in both cases there is a fever in combination with vomiting, headache and positive meningeal signs, differentiation of disease at the earliest date (during the first day from the patient's admission to the hospital) is crucial in pediatric practice. Objective: to assess possibility of using acute inflammatory response markers for early diagnosis and differential diagnosis of meningitis.

**Methods:** The possibility of using determination of markers levels for differential diagnosis of inflammation nature in case of meningitis was studied in 2 groups of patients on the basis of the Multidisciplinary City Children's Hospital No. 3: • first group "viral meningitis" - 22 children with meningitis of enteroviral etiology (prospectively); • second group is "bacterial meningitis" - 30 children with meningitis of meningococcal etiology (retrospectively).

**Results:** With viral meningitis in 11(50%) children, the level of CRP (C-reactive protein) in the blood serum did not exceed 10 mg/l and its value was within acceptable limits. In 10 (45.5%) patients, CRP level was in the range from 11 to 50 mg/ml and averaged 21 mg/l. In 1 patient (4.5%), the level of CRP exceeded 50 mg/l. In bacterial meningitis, CRP level in all patients (30 people) was higher than 10 mg/l and averaged 127.1 mg/l, while in 18 children (60%) it was higher than 50 mg/l, and in 12(40%) was in the range between 10-50 mg/l. In the group of patients with viral meningitis, the value of PCT (procalcitonin) in the blood serum was negative (below 0.5 ng/ml) and its value ranged from 0.16 ng/ml to 0.36 ng/ml, while in all patients with bacterial meningitis, the level of procalcitonin was either positive or sharply positive - from 0.6 ng/ml to 6.5 ng/ml.

**Conclusions:** Conducting an early differential diagnosis using procalcitonin is more precise and it helps to avoid unreasonable prescription of antibiotic therapy.