

## SUMMARY

Central nervous system infections in childhood have been still considered the diseases substantially increasing mortality and morbidity both in developed and developing countries.

133 children with central nervous system infection were treated at the Department of Infectious Diseases of the Faculty Hospital in Hradec Králové from 2002 to 2006. The prospective data analysis was used in order to widely implicit the issue of neuroinfections on the basis of clinical practice. The aim group consisted of three parts: children with bacterial meningitis, children with viral meningoencephalitis and children with neuroborreliosis.

As the 63 patients with bacterial meningitis were concerned in the observed period the unknown etiology of 10 cases was recorded. Among the viral meningoencephalitis (37 overall cases) the rate of unrevealed agents reached 27 %. In terms of the facts is apparent that assessment of etiology of viral neuroinfection has been troublesome – supporting fact is longer period from the initial clinical symptoms to the establishment of diagnosis varying from 3.5 to 5.5 days. Neuroborreliosis was proved in 33 children in the period of study. The onset of particular diseases is partially connected with specific seasons – It is more distinctly determined in the third group (neuroborreliosis).

Among the carried out examinations the cultivation has been still the „gold standard“. Incorporation of continuously advanced and accelerated molecular methods has appeared to be inevitable and has been improving the diagnostic effort.

Variety of presented complications have covered wide spectrum of recorded ones' in literature. Any effort to create a comprehensive diagnostic algorithm of neuroinfections in childhood seems to be non realistic. The key role is defined by a responsible, precise and erudite approach of first-contact physician as well as the right interpretation of the basic examinations' results.