

The aim of this study was to confirm the use of electrothermal atomic absorption spectrometry for the determination of selenium and manganese in the cerebrospinal fluid and to investigate concentrations of selenium and manganese in selected group of patients. For selenium was determined the detection limit 2,9 µg/l, for manganese 0,26 µg/l.

73 patients were examined (31 women, 42 men) whose average age was 14,1 years. The patients were divided into two groups according to age (56 children, 17 adults) and into two subgroups according to diagnoses (oncological, neurological). The control group consists of 18 subjects (5 women, 13 men, average age 21,7 years) with non-oncological and non-neurological diagnoses.

We found significantly increased selenium concentrations in cerebrospinal fluid in the control group, compared with the group with neurological diagnoses (median = 14,4 µg/l vs. 12,4 µg/l, $p < 0.05$). Elevated levels of manganese in cerebrospinal fluid was observed in a group of children with oncological diseases compared with control group (1,2 µg/l vs. 0,5 µg/l, $p < 0.05$).

Determination of selenium and manganese in the cerebrospinal fluid may have diagnostic importance in selected groups of patients.