Tumores malignos têm mais Arsênio e menos zinco no líquor


Concentrations of zinc, iron, molybdenum, arsenic, and lithium in cerebrospinal fluid of patients with brain tumors.

el-Yazigi A, Al-Saleh I, Al-Mefty O.

Abstract

We used flameless atomic absorption spectrophotometry to measure concentrations of Fe, Mo, Li, As, and Zn in cerebrospinal fluid (CSF) of patients with malignant brain tumors benign brain tumors, non-brain malignant tumors and control (non-neoplastic disease) patients. Mean (and SD) concentrations (microgram/L) of these elements in the control group were 62.7 (28.7) for Fe, 6.8 (4.8) for Mo, 0.7 (2.0) for Li, 1.3 (0.7) for As, 7 (5.9) for Zn. We could detect Li in less than 53% of controls. Zn concentrations in CSF of patients with astrocytoma (malignant brain tumor), benign brain tumors, or non-brain tumors were significantly (p less than 0.05) less than in control patients; the ratios for mean concentrations of Zn in tumor patients/control patients for the above groups were 0.3, 0.20, and 0.17, respectively. Concentrations of As in CSF of patients with non-brain malignant tumors were significantly (p less than 0.05) higher than in the controls; the ratio for mean CSF concentration of As in patients with non-brain tumors/control patients was 2.9. Differences in the concentrations of Fe, Li, or Mo among the various groups were nonsignificant.

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