

TOXIC DISORDERS

ATAXIA AND EARLY LEAD EXPOSURE

The effect of chronic exposure to lead on postural balance was studied in 162 six-year-old children examined in the Department of Environmental Health, and Children's Hospital Medical Center, University of Cincinnati Medical School, Cincinnati, OH. The five-year geometric mean blood lead concentration was 11.9 mcg/dL (range 4-28 mcg/dL). Most children reached peak PbB concentrations by 18-24 months. Increases in blood lead in CDC Class III category (<20mcg/dL) were significantly associated with increase in postural sway and poor postural balance, indicative of damage to vestibular/proprioceptive systems. Postural balance was measured with eyes open and eyes closed using a microprocessor-based strain gauge-type force platform system. (Bhattacharya A, Berger O et al. Effect of early lead exposure on children's postural balance. Dev Med Child Neurol 1995;37:861-878). ((Respond: Dr Amit Bhattacharya, Department of Environmental Health, University of Cincinnati Medical School, Cincinnati, OH 45267).

COMMENT. Because of the epidemiological nature of the study, the authors note that the results imply an association between elevated lead levels and impaired postural balance rather than a cause. However, because other neurotoxin exposures such as methylmercury and organochlorines were excluded, the association between lead exposure and ataxia most likely reflects an adverse effect of the lead on the developing nervous system. This postural balance measurement may be useful in assessing gross motor function of children at or below the CDC Class III category (<20mcg/dL) of lead exposure.

RADIATION-INDUCED MENINGIOMA

A case of radiation-induced meningioma that appeared in a 27-year-old woman, 12 years after treatment of a childhood-onset posterior fossa medulloblastoma, is reported from the Department of Neurosurgery, Bretonneau Hospital, Tours, France. She was admitted with a left facial neuralgia and transitory aphasia. MRI showed a large left temporal mass which was removed surgically. Histopathological examination was consistent with a meningotheliomatous meningioma. Eight months later the patient was readmitted with ataxia, memory disturbances, and left lower limb paresis. CT showed multiple intracerebral tumors in the left temporal area, posterior fossa, and interhemispheric area. Removal of the largest tumor showed a medulloblastoma recurrence. Despite chemotherapy, the patient deteriorated and died. (Dweik A et al. Radiation-induced meningioma. Child's Nerv Syst 1995;11:661-663).

COMMENT. Glial and meningeal cells are most commonly involved in radiation-induced neoplasms. Meningiomas may occur after low-dose, intermediate, or high-dose irradiation of the head. The meninges of children are particularly susceptible. The majority of radiation-induced meningiomas are situated in the falx and parasagittal area or over the convexity of the skull. The temporal and sphenoidal location of the above reported meningioma following irradiation is unusual.