

CASE 8

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A 2.1/2-year-old girl was diagnosed as having acute lymphocytic leukemia at the age of 13 months. Her initial therapy with prednisone and 6-mercaptopurine produced a clinical remission in 1 month. When the patient was 23 months-old an exacerbation occurred; it was treated with prednisone and oral methotrexate. This was changed to intrathecal methotrexate when leukemic meningitis developed. A satisfactory remission developed and lasted until the age of 28 months, when therapy with **Cytosan** and prednisone was begun. Because the desired results were not obtained, intravenous vincristine was started. Several weeks later the recurrence of meningeal symptoms necessitated the use of intrathecal methotrexate. At this time, 3 mg. of vincristine sulfate were given intrathecally. Shortly thereafter 200 ml. of cerebrospinal fluid was exchanged with 200 ml. of saline in 10 ml. aliquots. The second day after receiving the drug, the patient displayed an opisthotonic posture and thrashing movements. On the third day the child developed respiratory paralysis, became comatose, and died.

At autopsy the child weighed 35 lbs. and had moderate alopecia. Grossly the brain, spinal cord, and visceral organs were unremarkable. Microscopically there were lymphocytic infiltrates in the liver, spleen, kidneys, bone marrow and meninges. Striking neuronal changes were observed in the anterior horn cells of spinal cord and in the motor nuclei of the medulla.

Submitted are 1 H & E-stained slide of the spinal cord and one electron micrograph illustrating the fine structure of the neuronal inclusions.

For Discussion: Nature of intraneuronal inclusions.

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