SPINAL TUMORS DIAGNOSED DURING THE FIRST YEAR OF LIFE

WITH REPORT OF A CASE*

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In reviewing over 70,000 case histories from the Harriett Lane Home, Ford was able to find only 3 cases of spinal cord tumor, the youngest of these 3 patients being 9 years of age. The literature bears out the rarity of intraspinal tumors in children. Even more striking is the infrequency with which spinal tumors are diagnosed during the first year of life. In a review of 279 cases of spinal cord tumor collected by Antoni and in a more recent review of 451 cases collected by Adson no patient was found under 1 year of age. The author was able to find only 23 recorded instances in which an intraspinal tumor had been diagnosed during the first year of life. The purpose of this paper is to briefly review these 23 cases and to report an additional example of this unusual occurrence.

CASE REPORT

P. R., male, aged 5 months, was admitted to the University Hospital on April 11, 1949. He had been born at term and weighed 8 lbs. at birth. The mother's pregnancy, labor, delivery, and postnatal course had been uneventful, and the patient was her 13th child. He had had several upper respiratory infections, the most recent being 2 weeks prior to admission. He cried with each bowel movement as though he were straining to defecate. The stools were hard and dry. During the last 2 weeks there was constant dribbling of urine with no urinary stream. Two weeks prior to admission the mother accidentally struck the patient's back. Within 24 hours weakness in the lower extremities was noted. This weakness progressed until at time of admission he was completely paralyzed in his lower extremities except for slight motion in the toes.

Examination. B. P. 96/62; pulse 110; respirations 24; rectal temperature 98.0°; weight 15 lbs. 14 oz. Pain and temperature perception were diminished below the level of the 1st lumbar dermatome. There was flaccid paralysis of both lower extremities with some motion retained in the toes. The deep tendon reflexes, normal in the upper extremities, were hypoactive in the lower extremities, with sustained ankle clonus on the left and unsustained ankle clonus on the right. Hb. 85 per cent. WBC 0600: 29 per cent polymorphonuclears; 68 per cent lymphocytes (24 per cent atypical); 2 per cent eosinophiles; 1 per cent monocytes. Reticulocytes 0.4 per cent; platelets 37,800. Urea nitrogen, blood sugar, heterophile antibody, and serological tests for syphilis were within normal limits.

Roentgenograms of the chest and abdomen showed no abnormality. Intravenous pyelography was negative. Roentgenograms of the spine showed minimal dilatation of the spinal canal at the level of the 12th thoracic and 1st lumbar vertebrae (Fig. 1).

Lumbar puncture disclosed a complete subarachnoid block with yellow fluid containing 1 lymphocyte and 4 + globulin. The fluid clotted on standing. Due to the unreliability of the sensory level a pantopaque myelogram was done and revealed a complete block, the lower end of which was between the 1st and 2nd lumbar vertebrae. Following myelography the patient became completely paraplegic.

Operation. April 19, 1949. Anesthetic: intratracheal ether and oxygen. The spines and laminae of the 12th thoracic and 1st lumbar vertebrae were removed, disclosing an extradural, reddish-brown, granulomatous tumor. The inferior edge of the growth lay within the operative field but it was necessary to remove the spine and laminae of the 11th thoracic vertebra in

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order to expose the superior extent of the lesion. It was found that the tumor was of low vascularity, friable, and encircled the dural sac, but lay predominantly dorsally and on the left side. The tumor was removed piecemeal with curette. The muscles, fascia and skin were closed with silk.

Subsequent Course. The patient made an excellent recovery; 36 hours after operation he was again able to move his toes, and by the 10th postoperative day there was return of motor power to all muscle groups of both lower extremities with return of pain and thermal perception.

The pathologist, following microscopic examination of the tissue, felt that the lesion represented a myelocytoma (lymphocytoma). In light of this finding bone marrow studies were done. The hematologist felt that the bone marrow studies were compatible with lymphatic leukemia. At time of last examination on June 13, 1949, 65 days after operation, the patient showed no signs of neurologic disorder.

COMMENT

The 23 previously recorded instances in which an intraspinal tumor has been diagnosed during the first year of life are summarized in Table 1. The predominant