MULTIPLE PRIMARY NEOPLASMS OF THE CENTRAL NERVOUS SYSTEM

REPORT OF A CASE OF SPINAL EPENDYMOMA AND AN INTRACRANIAL MENINGIOMA. INTERVAL OF FOURTEEN YEARS*

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Multiple neoplasms of the central nervous system are no longer pathological curiosities, but in most reported cases the tumors arose from the same germ layer. Courville2 in 1936 collected from the literature 113 cases of multiple gliomas of the brain, to which he added 21 of his own. The case of multiple intracranial meningioma, reported by Echols4 in 1941, brought to 53 the total up to that time. Two cases of combined acoustic neurinoma and meningioma were reported by Davidoff and Martin.4 Cushing and Eisenhardt5 had formerly called attention to the frequent association of tumors of the meninges with acoustic neoplasms, and it was the feeling of Kernohan9 that multiple meningioma and neurofibroma are genetically related.

List10 reported a case in which he removed four meningiomas from the region of the foramen magnum and the upper cervical cord. The patient of Rand12 had separate spinal meningiomas at T3 and T6.

Alexander1 was able to find only 4 cases in which an intracranial meningioma was reported in association with a glioma of the cerebral hemisphere. To these he added 1 case of his own. Since that time Gass and Van Wagenen7 have reported a meningioma adjacent to an oligodendroglioma, and a patient of Feiring and Davidoff8 had a meningioma in association with a glioblastoma multiforme. The 1940 edition of Wilson's16 textbook of neurology collected from the literature 11 cases of multiple heterogeneous intracranial new growths.

Kaelber8 pointed out the possibility of dissimilar lesions of the cerebrospinal axis by reporting his case of an intracranial meningioma associated with syringomyelia. Poser11 recently reviewed the literature and showed the frequent association of syringomyelia with intramedullary neoplasms of the spinal cord. Syringomyelia is in this case a complication.

Because of the relatively few reported cases of heterogeneous neoplasms of the central nervous system, we are reporting our experience with a case of intracranial meningioma and a spinal ependymoma.

CASE REPORT

This was our first case of ependymoma with complete recovery.

Mrs. C.N., a 44-year-old, right-handed housewife, was first seen in August of 1941 with a 10-month history of progressive weakness in both legs and difficulty in walking. There was some mild discomfort in the thoracolumbar region on weight-bearing and numbness in both legs, which had begun 3 or 4 months after the onset of motor weakness and had ascended to the upper abdomen. For the past 4 or 5 months before examination, she had been unable to appreciate changes in temperature in the lower extremities. There was no significant abnormality of bladder or bowel.

Examination, Aug. 18, 1941. There was marked weakness in both lower extremities and she was unable to walk without assistance. There were increased reflexes in both legs, transient ankle clonus, and bilateral Babinski sign, with no involvement of the upper extremities. While touch and position sense were fairly good in the lower extremities, loss of sensation of pain, temperature, vibration and stereognosis extended upward to the level of the 5th rib.

Myelography revealed a complete block at the upper border of the 7th thoracic vertebra.

Operation. Laminectomy, extending from C7 through T6 inclusive, showed moderate swelling of the cord, greatest at the level of T5. The spinal cord was incised in the midline and a dark red, sharply circumscribed tumor, attached only in the region of the central canal, was carefully removed. The tumor extended throughout the length of the exposure and the estimated weight was 20 gm.

Microscopic Examination (Fig. 1). The tumor was composed of spindle cells that varied in shape and size, with hyperchromatic nuclei which were highly granular. Mitotic figures were present but were not abundant. There was a tendency to rosette arrangement. Diagnosis: Ependymoma.

Course. Her condition following surgery was definitely worse, but she was able to walk within 6 months, and at the end of the year walked perfectly, although she tired easily. Pain and other forms of sensation recovered completely, except for some hypesthesia in the sacral segments on the left. Reflexes were essentially normal.

Interval History. In 1948, the patient had a thyroidectomy with removal of a benign adenoma, and in 1950 a hysterectomy for a uterine fibroid. Gait had continued to be normal and she had no symptoms until 1953.

Fig. 1. Photomicrographs of ependymoma, intramedullary, C7-T6. Total removal in 1941, with complete relief of symptoms.