PRIMARY MELANOMA OF THE SPINAL CORD


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Among the infrequent tumors of the spinal cord, one of the rarest is the primary melanoma. Though extensively studied in its cutaneous aspect, melanoma of the central nervous system has received less, though equally thorough, description. An instance of melanoma originating in the meninges of the cervical spinal cord has been encountered, surgically treated, and followed to conclusion.

CASE REPORT

Clinical History. A 33-year-old white woman, a housewife, reported pain occurring daily in the base of the neck and left shoulder, and along the lateral aspect of the left arm, which began in December 1957. She was hospitalized in May 1958, and after a period of physical therapy had failed to give relief, the following were found: 1) diminished left biceps reflex and atrophy of muscle, 2) reversal of normal cervical-spine curvature on roentgenogram, with calcification at the C4-C5 level, and 3) Queckenstedt test showing a partial block.

Past history revealed a similar pain in the neck at the age of 18 years, which occurred almost daily for 8 years, until relieved by the manipulations of a chiropractor. Occasional dull ache in the neck, of 1–2 days’ duration, had ensued in the intervening years.

After myelography had revealed an intradural space-occupying lesion from C4 through C6 an operation was performed. Through a laminectomy of C3–C6, the spinal cord was exposed, and an ovoid mass of tumor was encountered on the ventral left lateral aspect of the cord, extending from the upper portion of C4 to the lower portion of C6 (Fig. 1). Subdural in location, it was purplish-black in color and firm in consistency. The tumor did not seem to invade the medullary substance of the spinal cord, but markedly compressed it. Both motor and sensory nerve-roots were involved by tumor, which extended into the foramina of the nerves. The tumor was removed in piecemeal fashion, with little apparent damage to the cord, only the tumor in the C5 foramen being inaccessible.

Frozen-section report was that of a benign tumor, perhaps hematoma. However, on the permanent sections, a diagnosis of primary leptomeningeal melanoma was made. Some physicians favored a diagnosis of benign pigmented meningioma.

Postoperatively, she had left hemiplegia, which gradually cleared, except for residual paralysis of the left upper arm. In order to exclude the possibility of a metastatic melanoma, the patient was seen in consultation by the Dermatology, Ophthalmology, Gastroenterology and Gynecology Services. There was no evidence of pigmented lesions anywhere, except for a mole on the left foot, which was removed and found to be an intradermal nevus. She was discharged from the hospital 1 month postoperatively.

In April 1959, after 10 months of relatively little difficulty except for her paralyzed arm, she began to have trouble walking plus weakness in the other arm. Shortly thereafter, she had onset of nausea and vomiting, and in October 1959, a ventriculo-auriculostomy was necessary for the relief of internal hydrocephalus. The patient’s condition deteriorated slowly but progressively and she expired Jan. 22, 1960, 25 months after onset of symptoms.

Autopsy. The immediate cause of death was an ascending urinary tract infection associated with terminal bronchopneumonia.

Pathological findings of importance were confined to the central nervous system. Neoplasm was not found in any other organ, nor were any cutaneous nevi found despite specific search. Melanosis of the colon was not present, nor were any pigmented areas observed elsewhere. The eyes were not removed for examination, but no abnormality had been noted on repeated ophthalmoscopic examination.

Examination of the spinal cord was effected by incising the fibrous scar of the previous cervical-laminectomy operation and removing the spinous processes of the vertebrae below that level, thus exposing the spinal canal from C2 down into the lumbar portion (Fig. 2).

Massive recurrence of tumor in the upper

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Fig. 1. Drawing of operative findings through cervical laminectomy, showing firm purplish-black subdural tumor.

Fig. 2. Spinal cord (C2 to L1) removed at autopsy, showing recurrent tumor in cervical portion, plus numerous dark nodules and spots studding remainder of cord.

Fig. 3. Hemisection of upper portion of spinal cord, showing massive cervical recurrence, plus isolated subarachnoid and medullary nodules of tumor. Areas of cystic degeneration are scattered through substance of cord.

Fig. 4. Close-up of isolated nodules of tumor in Fig. 3, illustrating origin in pia mater with compression of adjacent cord.