LATE RECURRENTRE OF SPINAL-CORD MENINGIOMA

EMANUEL H. FEIRING, M.D., AND KEVIN BARRON, M.D.*

Divisions of Neurosurgery and Neurology, Montefiore Hospital, New York, New York

(Received for publication March 23, 1962)

UNLESS a tumor is removed completely, it will continue to grow and eventually give rise to recurrent manifestations. It is well known that meningiomas frequently lend themselves to total removal with resultant cure. It is also recognized that recurrence may follow what appears to have been a complete excision of this type of tumor. This is hardly surprising, especially with regard to the intracranial meningiomas since their location and sessile attachment, particularly at the base of the skull and in the parasagittal region, may allow microscopic fragments of the tumor or even gross extensions into adjacent structures to go unnoticed at the time of surgical removal. Simpson 5 has dealt with this problem in detail.

Judging from the relative paucity of literature on the subject, recurrence of a spinal-cord meningioma would appear to be a much less common phenomenon. Svien and Wood 9 have stated recently that "most patients from whom meningiomas of the spinal cord are removed do not have recurrences of the neoplasm." This represents the opinion of virtually all others who have reported their experiences. Undoubtedly the relative accessibility of most spinal-cord meningiomas, other than those attached anterior to the cord, permitting adequate excision of the involved dura mater and thereby assuring removal of the tumor in its entirety, accounts for this. As pointed out by Cushing and others subsequently, resection of the involved dura mater is absolutely necessary to prevent recurrence. Whereas usually its dural attachment is of limited extent, occasionally the tumor may involve dura mater extensively and virtually encompass the cord. 5 As a rule also, separation of the tumor from the spinal cord may be accomplished without great difficulty. On rare occasions, however, a meningioma, arising in the pia, may grow deeply within the cord. 6

Recurrence of a spinal-cord meningioma has been reported after varying periods following initial removal, the longest recorded interval being 23 years. 9 Two additional cases of probable recurrence after a considerable lapse of time will be presented in this communication.

CASE REPORTS

Case 1. M.H. 3101652. Y.G., a 73-year-old white female, was admitted to Montefiore Hospital on Jan. 20, 1959 because of progressive weakness of the lower extremities and impairment of gait of 4 years' duration. Two years previously pain had developed in the mid-scapular area radiating into the shoulders and about the upper chest, aggravated by straining and coughing.

She had been operated upon in 1928 at the Mount Sinai Hospital in New York City for a meningioma of the upper thoracic spine. Unfortunately, details of this illness were not available although the records of the Mount Sinai Hospital confirmed the date and type of operation and the nature of the tumor.

Examination. There were no neurologic abnormalities referable to the cranial nerves and upper extremities. The lower limbs were weak and her gait was spastic. The knee and ankle jerks were very brisk and bilateral Babinski's toe sign was demonstrable. Position and vibratory appreciation were defective in the lower extremities. Perception of pinprick and touch was impaired below the mid-thoracic level approximately, though one examiner found a level at T4. A midline scar was present overlying the spine in the upper thoracic region.

Laboratory Data. Roentgenograms of the dorsal spine revealed evidence of a previous laminectomy involving the 4th, 5th and 6th vertebrae (Fig. 1).
Lumbar puncture disclosed clear, colorless cerebrospinal fluid under a pressure of 60 mm. water. Following bilateral jugular compression, the level of fluid in the manometer rose to only 80 mm., whereas abdominal compression caused a rapid rise to 300 mm. The protein content of the cerebrospinal fluid was 117 mg. per cent. Myelography revealed an incomplete obstruction to the cephalad flow of Pantopaque at T5, the appearance of the block suggesting an intradural, extramedullary tumor (Fig. 2).

Operation. On Feb. 9, 1959, a laminectomy was performed above the site of the previous operation, and the dissection was continued in a caudad direction, separating dense scar tissue from underlying dura mater. At a level corresponding to the upper half of the original laminectomy, a hard mass was palpated through scar tissue and dura mater. The lower pole of the lesion was identified and the dura mater was opened. A hard reddish-gray extramedullary tumor, about 2.5 cm. in length, lying to the left of the cord was brought into view. It was firmly adherent to the cord and attached laterally and anteriorly to dura mater. A piecemeal removal of the tumor was accomplished, including its lateral dural attachment. Fragments of tumor lying in front of the cord were left behind. The dural defect was covered with Gelfoam and the wound was closed.

Histology. The tissue consisted largely of psammoma bodies surrounded by densely packed, elongated cells, some of which formed whorls. It fulfilled the criteria for the diagnosis of a meningocytic meningioma (Fig. 3).

Course. Following operation the patient improved considerably and was ambulatory when discharged on March 19, 1959. Towards the end of June, 1959, however, she again began to complain of increasing weakness of the lower extremities and backache. These symptoms became more pronounced and led to rehospitalization on July 27, 1959. Neurologic examination at this time disclosed a moderate degree of paraparesis together with hyperreflexia and bilateral Babinski's toe sign and a sensory level at about T5. Myelography again revealed an obstruction to the cephalad flow of Pantopaque at the level of the 5th dorsal vertebra. A third operation was performed on July 30, 1959; the remaining tumor lying anterior to the spinal cord was removed and