MULTIPLE SPINAL CORD MENINGIOMAS

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In most large series of neoplasms of the spinal canal, spinal cord and its leptomeninges, the meningioma group comprises approximately 25 per cent. Occasionally a meningioma of the spinal cord is associated with multiple neurofibromas or multiple intramedullary ependymomas. The incidence of multiple meningiomas is small when compared with the frequency of their single occurrence, and in most instances of multiplicity they are intracranial\textsuperscript{5,6} or intracranial and spinal.\textsuperscript{10} Certainly the examples of multiple meningiomas confined exclusively to the spinal cord are rare,\textsuperscript{3} which leads the author to present the following case.

REPORT OF A CASE

Removal of meningiomas from the 6th and 3rd thoracic cord segmental levels respectively. Recovery.

H. D., a 34-year-old white woman, was admitted to the University Hospital on March 12, 1951, because of progressive loss of sensation and of weakness in her lower extremities. A year prior she had noticed “tingling” in her feet which soon progressed to complete and constant “numbness.” During June 1950 she became unsteady in walking with occasional episodes of “buckling” of her knees. The weakness in her legs also progressed, being greater on the right. One month before admission her right foot dragged constantly although she could still walk unaided. During January 1951 an “aching pain” developed below the right scapula which was provoked by coughing or lying down; however, this pain did not radiate in a segmental distribution. Coincidentally she noticed the absence of sweating over the lower extremities, and a mild degree of urinary urgency and frequency developed.

Examination. The patient was a well developed, slightly obese female appearing neither acutely nor chronically ill. There was a complete loss of pain and temperature sensation below the 7th thoracic dermatome except for sparing over the sacral segments bilaterally. Deep pain sensation was absent in the legs. Sense of motion and position was normal but that of vibration was diminished below the 8th thoracic segment and was absent at the ankles. Discriminatory touch was impaired below the level of analgesia. Reaction to the Romberg test was positive. Marked weakness of the legs, especially on the right, with associated mild spasticity was noticed, although the patient was still able to walk without help. The deep reflexes of the lower extremities were equally hyperactive with bilaterally unsustained patellar and ankle clonii; abdominal reflexes were absent and Babinski’s sign was present bilaterally. Sweating was absent below the 7th thoracic dermatome.

Roentgenograms of the chest and the entire spinal column appeared normal. Following a lumbar puncture, which revealed a complete block to jugular compression, a myelogram was done using 2½ cc. of pantopaque. This demonstrated the block to be at the midportion of the 5th thoracic vertebra with sharp projections of the pantopaque anteriorly and posteriorly in the lateral view (Fig. 1). No CSF was withdrawn at the time of the lumbar puncture for fear of increasing the paresis. Routine studies of blood and urine revealed nothing abnormal.

1st Operation. A laminectomy under intratracheal general anesthesia was performed on March 15, 1951, removing the lamina and spines of the 4th, 5th, and 6th thoracic vertebrae. At the level of the 5th thoracic vertebra the dura was seen to be bulging and the extradural adipose tissue was absent. After opening the dura in the midline, a tumor was evident on the right pushing the spinal cord posteriorly and to the left (Fig. 2). It was attached ventrolaterally by a sessile base to the dura at the level of the 6th thoracic spinal cord segment. The
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arachnoid was opened and the well-encapsulated tumor delivered from beneath the spinal cord. Following the removal of this tumor the cord slowly assumed its normal position. When an attempt was made to pass a small, soft rubber catheter cephalad beneath the dura, an obstruction was encountered at the level of the 3rd thoracic lamina. Accordingly the laminectomy was carried upward enough to expose the point of block and upon opening the dura here a second neoplasm was disclosed. It also was attached to the dura by a sessile base but in a dorsolateral position on the left (Fig. 2). The spinal cord at this site, following removal of the

mass with its attached dura, appeared normal with only minimal compression as compared to the spinal cord at the site of the first tumor. The catheter was subsequently passed superiorly into the cervical region and no further obstruction was met. The dura was left open and the wound closed.

Course. Forty-eight hours after operation the paresis increased and progressed to complete paralysis with loss of all sensory function below the 7th thoracic dermatome.

2nd Operation. Re-exploration of the spinal cord was performed on March 17, 1951 because of the possibility of postoperative hemorrhage. There was no hemorrhage but marked edema of the spinal cord was present at the site of the lower tumor. The subarachnoid space above this was filled with clear spinal fluid.

Course. Two days following this procedure the patient was able to move the toes of her left foot. Function slowly returned and at the time of discharge, April 29, 1951, she was walking with a slightly spastic gait. Bladder function was normal as shown by cystometric studies. Vibration sensation was absent at the ankles; all other sensory functions had completely returned. The reflexes were hyperactive with a sustained ankle clonus on the right. Babinski's sign was not present.