PRIMARY MALIGNANT MELANOMA OF
THE SPINAL CORD

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PRIMARY melanoma of the spinal cord is a rare cause of compression of
the cord. It is the purpose of this paper to present such a case, with an
analytical review of 25 cases in the literature, 16 verified by autopsy
and 9 surgically verified.

CASE REPORT

G.S. (MH #70748, Autopsy #13900). A 42-year-old white male had sudden onset
of constant pain in the left flank about 4 months before admission. The pain lasted
for 2 days and was relieved by the passage of a renal calculus. With subsidence of this
pain, he experienced low-back pain which radiated anteriorly to the abdomen, and
which was relieved somewhat by a corset. During the next few months pain in the
back became more severe. A "pins-and-needles" sensation developed and then
numbness of both legs and of the pelvic area. There was occasional buckling of his
knees, subsequently followed by frank weakness, more marked on the right side. In
the month prior to admission, there was some difficulty in initiating urination, as
well as some dribbling. He was admitted on Jan. 23, 1955.

Examination. General physical findings were within normal limits. Neurological
examination revealed marked weakness of both lower extremities and a wide-based
gait. There was a complete sensory level at T12. The myotatic reflexes in the legs
were hyperactive, with bilateral Babinski’s sign and right ankle clonus.

Laboratory Data. Hemoglobin, count of red and white blood cells, and urine were
within normal limits. Roentgenograms of skull, chest and thoracic and lumbosacral
spine were normal, as was the intravenous pyelogram. Lumbar puncture: initial
pressure 90 mm. water, with evidence of partial manometric block; total protein
120 mg. per cent; sugar 85 mg. per cent; 9 fresh red blood cells.

Four days after admission, lumbar puncture revealed a partial block on manome-
tries. Myelography immediately thereafter showed complete obstruction to the
passage of the contrast material at the level of T10, with the characteristics of an in-
tramedullary tumor (Fig. 1).

Operation. Laminectomy of T7 to T11 vertebrae was performed (by Dr. Sidney
W. Gross), with disclosure of an infiltrating intramedullary tumor between T8 and
T10. The normal anatomy of the cord was completely obscured, the area being gray-
ish-white with many large veins. On the right lateral surface of the tumor was a
black area which, when opened, proved to be a cystic cavity containing approxi-

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Fig. 1. Myelogram, with obstruction to flow of contrast medium in cranial direction at level of T10. (Left) Anteroposterior view: cord appears deviated toward the left. (Right) Lateral view: curved border of column is suggestive of intradural, possibly intramedullary, lesion (note that anteroposterior view has some characteristics of intradural, extramedullary localization).

approximately 5 cc. of black material. Following evacuation of this material, pulsations of the cord were noted for the first time.

Pathologic Report. Microscopic sections of the surgical specimen consisted of many fragments of neoplasm. The cells were poorly defined but showed pale, generally ovoid nuclei varying considerably in size. The cytoplasm was pale and eosinophilic, with many fine dark-brown granules of pigment. Diagnosis: malignant melanoma.

Course. There was gradual improvement following surgery, so that the patient could walk with aid. In the 3rd postoperative month, radiotherapy (Cobalt) was started, with a total of 6,000 r given to the T7–L1 area in a period of 2 months. Despite this, his condition gradually deteriorated from the 4th postoperative month, with increase of spasticity in the lower extremities, development of decubiti, urinary-tract infection, and marked hypochromic anemia. Repeated examinations of urine for melanin gave negative results. He died on Aug. 17, 1955, 6½ months after admission.

Autopsy. General anatomical findings. A laminectomy scar was present. Decubiti of buttocks, hips, and legs were noted, with necrosis and fracture of the neck of the right femur. General pathological examination was completely negative for melanotic lesions. This included examination of both eyes (there was a localized chorio-retinopathy in one) and microscopic sections of the following organs and structures: