SOLITARY SPINAL CORD TUMORS OCCURRING IN MULTIPLE MEMBERS OF A FAMILY

Richard N. Myers, M.D., George M. Austin, M.D.*, A. Earl Walker, M.D.,
and John P. Gallagher, M.D.

Divisions of Neurosurgery, The Lankenau Hospital, Philadelphia, Pennsylvania, and
University of Oregon Medical School, Portland, Oregon, The Johns Hopkins
Hospital, Baltimore, Maryland, and the Georgetown University
Hospital, Washington, D. C.

(Received for publication March 9, 1959)

Although solitary neurofibromas of the spinal cord in both children and adults
are not uncommon, it is rare to find them with a familial incidence. Multiple neuro-
fibromas in one patient and in various members of a family can occur in von Reck-
inghausen's disease, or neurofibromatosis. This, however, is a different situation.
Recently our attention was called to the incidence of solitary neurofibroma of the
spinal cord in 3 members of the same family. All of the tumors in the family reported
here were successfully removed at operation and the patients returned to their previ-
ous mode of living without further neurologic involvement. There was nothing in
the history or physical examination of these patients to suggest that one was dealing
with neurofibromatosis or von Recklinghausen's disease. Because we have been able
to find only rare references in the literature to this type of tumor, we believe that
these cases are of sufficient interest to report at this time.

CASE REPORTS

Case 1. A.F., a 70-year-old housewife and the mother of the following 2 patients, was ad-
mitted to The Suburban Hospital on Feb. 15, 1954, with the complaint of gradually progres-
sive pain in her right hip and thigh. The pain was aggravated by coughing or straining, but
there was no change in functions of the bladder or bowel. She walked without difficulty and
did not notice any weakness in either lower limb. Past history included a previous radical
mastectomy.

Examination. General physical and neurological findings were normal.

Myelography showed a complete block at L1. Spinal fluid contained 205 mg. per cent pro-
tein, but was otherwise normal.

Operation. On Feb. 26, 1954, under general anesthesia, laminectomy was carried out, the
level of exposure being from T10 to L2. On opening the dura mater an elongated tumor was
encountered. It was encapsulated, and although at its inferior end it was attached to one of
the roots of the cauda equina, it was removed without difficulty.

Pathological Report. The tumor was smooth-surfaced and covered with a dense blue, shiny
capsule. The mass was solid in the middle and cystic at either pole. The solid portion con-
sisted of greyish-yellow friable tissue, while the cysts contained a heavy golden fluid. Micro-
scopic diagnosis: neurofibroma (Fig. 1).

Course. The patient made an uneventful recovery and was discharged on the 8th postop-
erative day. Her pain was gone. On follow-up examination 8 months later neurological find-
ings were normal except for some sensory loss on the anterior aspect of her right thigh.

Case 2. R.F., a 32-year-old electronics engineer (and the oldest son of the preceding pa-
tient), was admitted to The Johns Hopkins Hospital on Mar. 9, 1956, with the complaint of

* Present address: Division of Neurosurgery, University of Oregon Medical School, Portland,
Oregon.

783
gradually progressive numbness and weakness of his right leg for 1\(\frac{1}{2}\) years. For the last 3 months he had had some difficulty in starting urination, which became more marked in the last 3 weeks. For 2 months he had noted paresthesias in his left leg, while the weakness in his right leg became so pronounced that he limped considerably. For 2 weeks he had had some difficulty with his bowels. He noted no change in his sexual potency. One week before admission there was onset of a continuous low-back ache, and in the morning he had extensor spasms of both legs lasting about 30 minutes.

Examination. General physical findings were normal. There was diminished appreciation of all sensory modalities below T6 on the right and T7 on the left. There was no loss of sensation around the saddle region. Position sense was impaired in the left great toe. Motor power was impaired in the muscles of the hips and knees, but not in the ankles. The flexors of the hip were weak, especially on the right. He had bilateral positive Babinski's reflex.

Myelography showed a partially obstructing lesion extending from T4 to T6. The spinal fluid contained 194 mg. per cent protein, but was otherwise normal.

Operation. On Mar. 14, 1956, under general anesthesia, laminectomy was carried out, the level of exposure being from T2 to T6. On opening the dura mater an encapsulated tumor was seen lying on the dorsal surface of the spinal cord, displacing it to the left. The lesion was resected from the arachnoid and lifted from the cord. At its middle a root passing laterally to the intervertebral foramen was cut, and the tumor was removed.

Pathological Report. The tumor was an oval mass measuring 3\(\times\)1.6\(\times\)1.6 cm. On section it had a homogeneous yellow fasciculated appearance with tiny hemorrhagic areas. In microscopic sections it consisted of streams and whorls of elongated cells lying side by side, having cigar-shaped nuclei and bipolar processes. The capsule was composed of connective tissue.