INTRADURAL LIPOMAS OF THE SPINAL CORD
WITH PARTICULAR EMPHASIS ON THE "INTRAMEDULLARY" LIPOMAS

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The first reported case of spinal lipoma was that of Gowers in 1876. Ehni and Love,15 in 1945, were able to collect 29 cases, including 2 of their own. Since that time, cases have been reported by Collins and Henderson,10 Barraquer-Ferré et al.,4 Johnson,26 Taniguchi and Mufson,42 Crosby et al.,11 Sarkar et al.,36 and Wycis.46 The addition of the 2 cases to be reported here, and of others already in the literature prior to 1945, brings the number of reported extra- and intramedullary lipomas to 51. The occurrence of 2 such cases within a short period of time in our own experience prompted a review of the publications since that of Ehni and Love,15 and an analysis of all reported cases (Table 1).

CASE REPORTS

Case 1 (No. 50,305). A 15-year-old girl was admitted to the Methodist Hospital on Aug. 25, 1954, with the chief complaint of weakness of both legs and difficulty in walking. Two years previously, she had noted weakness of the right leg. Poliomyelitis was diagnosed and physiotherapy was suggested. She improved markedly so that she could walk again without difficulty. One year later she again noted impaired gait. The lower extremities felt heavy and it was hard for her to control her steps, since she could not feel the ground with the right foot. In the month prior to admission, she had pain in the right hip and numbness involving the right calf and heel. In going downstairs she was unable to balance on her right leg, which seemed to buckle at the knee; she could stand on the left leg without difficulty. Lumbar puncture performed 1 week prior to admission revealed increased cerebrospinal fluid protein; no further data were available. Following the lumbar puncture, the patient was unable to walk at all.

Neurological Examination. There were no motor, reflex, or sensory changes in the upper extremities. The right thigh measured 2 cm. less than the left. There was only minimal movement of the left leg, the right being immobile. Muscular tonus was increased bilaterally, with ankle and patellar clonus; Babinski, Oppenheim and Gordon signs were present bilaterally. Abdominal reflexes were absent. There was reduced sensation to pain, temperature and touch, more marked on the left side, from T3–4 down; two-point discrimination, position and vibration sense were lost in both lower limbs. At the level of the 3rd thoracic spinous process, there was a soft, non-tender, mobile mass, with the overlying skin thin and glistening.

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The clinical impression at this time was that of a spinal cord tumor at T2–3. The presence of a subcutaneous lipomatous mass suggested the possibility of a lipoma of the cord.

Roentgenograms of the spine in anteroposterior and lateral projections showed considerable enlargement of the spinal canal, with erosion of the pedicles and of the posterior aspect of the vertebral bodies from C5 to T4 (Fig. 1).

Operation. On Aug. 30, 1954, laminectomy was performed from C4 to T4. A mass of fatty tissue was found subcutaneously, attached to the superficial fascia in

![Fig. 1. Case 1. (Left) Widening of spinal canal and erosion of pedicles from C5 to T3. (Right) Erosion of posterior aspect of C5 through T1 vertebrae, with widening of spinal canal and alteration of normal curvature.](image)

the lower portion of the incision; it did not penetrate beneath the bone. After removal of the laminae from C5 to T3, no dural pulsation was seen. Upon opening the dura mater, fatty tissue extending from C5 to T3 was noted completely covering the spinal cord (Fig. 2). The tumor seemed to be intimately attached to the posterior aspect of the spinal cord, was covered by pia mater, or capsule, and no plane of cleavage could be found. A 2-cm. incision was made in the midline of the tumor and carried down to a depth of 1 cm. without visualization of spinal cord tissue. The nerve roots from C5 to C8 appeared embedded in the tumor mass. No attempt at removal was made because of extreme adherence of the tumor to the spinal cord and the involvement of nerve roots. A biopsy was taken and the dura mater was left open for decompressive purposes.

Pathologic Report. Microscopic sections of the specimen revealed adult adipose tissue (Fig. 3). Also present was a well-encapsulated, mucoid tissue with sparse,