Intraspinal Epidermoids
Report of Two Cases

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Epidermoid tumors occur infrequently in the central nervous system. Their incidence is estimated variously at from 0.2–1 per cent of all intracranial tumors. The incidence of intraspinal epidermoids is even less. MacCarty and his associates of the Mayo Clinic found only 3 intraspinal epidermoids among 44 epidermoids of the central nervous system. More recently Manno et al. from the same clinic made a comprehensive review of the literature. They collected 88 cases of intraspinal epidermoids, and added 2 of their own, bringing the number to 90.

It is the purpose of this communication to put on record 2 more cases. One of them is a verified cervical epidermoid communicating with a dermal sinus. The other is a low-dorsal epidermoid, producing compression of the cord indistinguishable from other space-taking intraspinal lesions.

Case Reports

Case 1. A 5-year-old boy was seen because of a draining sinus in the midline of the back of his neck (Fig. 1). It had been present since birth. The orifice of the sinus was at the center of a small circular bluish mass and surrounded by a tuft of long yellow hairs. The child was brought to the hospital because his schoolmates were fond of pulling on the hairs. There was no other complaint and he was free from neurological symptoms.

Roentgenography revealed multiple bony anomalies involving the cervical and dorsal vertebrae and the ribs (Fig. 2). At operation an elliptical incision, surrounding the sinus, was made. The dissection was deepened with the tract in the middle until it was found that it passed through a bony mass consisting of the fused spinous processes of C3–C5 vertebrae.

Laminectomy of C2–C6 was completed and the tract was followed until it was found attached to the dorsal aspect of the dura mater at C4 level. The dura mater was opened. On the posterior surface of the cord two glistening masses were found. One was the size of a walnut and the other was a little smaller. The capsule of each was opened and their characteristic-looking contents were evacuated completely. The deep part of the capsule was adherent to the cord and no attempt at its excision was done. There were two indentations, corresponding to the two excised masses, on the spinal cord.

Recovery was uneventful. Pathological examination revealed the typical picture of epidermoid (Fig. 3).

Case 2. A 24-year-old university student was seen because of inability to walk. He was well until 4 years prior to admission when he started to feel numbness and
sensation of “pins and needles” in his left foot. This sensation extended upward until the whole lower limb was involved in 6 months. Four months later, he became aware of weakness of the left lower limb. A year later, the right lower limb was affected in the same manner. Weakness of both lower limbs progressed until he was unable to walk. The patient had been a football player. There was history of trauma to the back on the football field, 6 months prior to the onset of his symptoms.

Examination revealed spastic paraparesis, the left side being more affected. Hypesthesia was more marked on the right side. There was a definite sensory level at the umbilicus. Deep sensation was impaired, more so on the left side. The lower abdominal reflexes were absent. Plantar reflexes were extensor on both sides. Manometry showed a complete block. Total proteins in the cerebrospinal fluid were 46 mg per cent with 4 lymphocytes. Myelography revealed complete arrest of contrast medium opposite D10 vertebra. This was typical of an extramedullary tumor. There was a cutaneous nevus, about 6 cm. in diameter, overlying D10 vertebra.

Laminectomy of D8–D11 was done. An oval tumor, 1.5X1 cm. in size, was found on the left side of the cord opposite D9–D10 vertebrae (Fig. 4). It was identified immediately as epidermoid. The capsule was incised and the characteristic contents came out in the form of laminated flakes. The deep part of the capsule was firmly adherent to the spinal cord. No attempt was made to remove the firm capsule.

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**TABLE 1**

*Classification of intraspinal epidermoids (82 cases)*

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of Cases (Manno et al.?)</th>
<th>No. of Cases (Present Paper)</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>0</td>
<td>History of tuberculous meningitis</td>
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<tr>
<td>2</td>
<td>15</td>
<td>0</td>
<td>History of lumbar punctures</td>
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<tr>
<td>3</td>
<td>6</td>
<td>1</td>
<td>Associated communicating dermal sinuses</td>
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<tr>
<td>4</td>
<td>10</td>
<td>1</td>
<td>History of trauma</td>
</tr>
<tr>
<td>5</td>
<td>35</td>
<td>0</td>
<td>Miscellaneous findings</td>
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