MENINGIOMA OF RECORD SIZE WITH UNUSUAL FEATURES

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Intracranial tumours of record size occasionally merit a brief report, especially if they give rise to unusual complications. The following case history is of interest because the tumour was first visualized in the lateral ventricle in a child of 5½ years and had reached the enormous size of 1353 grams when finally removed 10 years later. Inconclusive biopsy at the first operation led to failure in establishing the correct diagnosis, and prolonged refusal on the part of the parents prevented removal long after its slow growth and deposition of calcium salts had made the benign character of the tumour evident. Although complete removal of this meningioma was carried out successfully in two stages, epileptic seizures with mental deterioration followed and the patient finally died 6 months afterwards of hydrocephalus secondary to an unusual hygroma which developed in the huge cavity left after removal of the tumour.

A review of previous accounts of meningiomata of record size shows that the largest described by Cushing and Eisenhardt\(^1\) weighed 310 grams. In their book they also cited an unpublished 341-gram meningioma removed by Hoen. Pilcher,\(^5\) who summarized the literature in 1943, reported one of 374 grams, which he had removed, and mentioned a still larger one recorded by Davidoff.\(^2\) In this case the weight of 885 grams included not only the tumour proper but an undetermined amount of cranial exostosis.\(^*\)

CASE HISTORY

A 5½-year-old boy first entered the Massachusetts General Hospital in 1936, with a history of intermittent vomiting and headaches which had begun several months after a fall downstairs at the age of 18 months. The baby had been unconscious for a few minutes, but had recovered without other immediate sequelae.

Examination revealed right internal strabismus and nystagmus. Awkwardness and dysynergia of the right arm with unsteadiness of gait suggested a cerebellar neoplasm. Motor power, sensation, and reflexes were normal. Ophthalmological findings were papilloedema of 5 D., reduction of visual acuity to 20/200, and contracted visual fields with a suggestive right homonymous hemianopsia. Skull films at this time showed evidence of prolonged increase in intracranial pressure.

At the time of ventriculography combined ventricular-lumbar pressures were recorded:

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<thead>
<tr>
<th></th>
<th>R. ventricle</th>
<th>L. ventricle</th>
<th>Lumbar space</th>
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<tr>
<td>Initial pressure:</td>
<td>400</td>
<td>—</td>
<td>455</td>
</tr>
<tr>
<td>Colour: Clear &amp; colourless</td>
<td>Deeply xanthochromic</td>
<td>Slightly xanthochromic</td>
<td></td>
</tr>
<tr>
<td>Protein: 24</td>
<td>2280</td>
<td>708</td>
<td></td>
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<tr>
<td>Goldsol: 1122210000</td>
<td>34455555555</td>
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\(^*\) Since this manuscript has been accepted for publication Dr. Eisenhardt has called our attention to a case report by C. W. Laymon in Minnesota Medicine for November, 1949 (32: 1182-1183). This records a giant meningioma which had invaded the right frontoparietal portion of the skull and expanded beneath the scalp to a “size of two grapefruits” and at post mortem weighed 2300 grams. The
Ventriculography showed the right lateral ventricle to be enlarged. Both it and the 3rd ventricle were displaced to the right. Only the posterior horn of the left lateral ventricle filled with air. This appeared to be enlarged with "a sharp concave anterior margin consistent with amputation of the ventricle in this area."

1st Operation. On Nov. 28, 1936 a left occipitoparietal craniotomy and exploration, carried out by Dr. John S. Hodgson, disclosed an encapsulated tumour which blocked the midportion of the lateral ventricle. Owing to the high degree of intracranial pressure and bleeding, it was felt that a radical attack on the tumour was out of the question, so only a biopsy was taken. It was not possible to close the bone flap, which had to be sacrificed to provide for decompression.

Microscopic Report. The specimen proved inadequate for a positive diagnosis. "The findings are probably consistent with polar spongioblastoma, although fibrils are more numer-

ous and heavier than is usual. The wall of a cyst in an astrocytoma is another possibility."

Course. Postoperative convalescence was uneventful, but a cerebral hernia and a right homonymous hemianopsia rapidly developed. During the ensuing 10 years the hernia slowly increased. In 1937, except for the homonymous field defect, a mild degree of optic atrophy, and a 5-inch herniation, he was a normal appearing boy. Headaches and papilloedema had subsided. In 1944, however, there developed a right hemiparesis and convulsions. These began with an epigastric aura and clonic movements of the right arm, which rapidly became generalized. Although right-handed and temporarily unable to talk after his seizures, there was never persistent aphasia. At our suggestion he was taken by his parents to Montreal, where he was examined by Dr. Wilder Penfield. Despite his advice and repeated efforts on our part, operation was refused by the parents. In 1946 the boy had to be taken out of school because of his seizures and was finally readmitted for operation at his own insistence in September, 1946.

Examination on 2nd Admission. The occipitoparietal herniation protruded a good 6 inches (Fig. 1A). There was a moderate degree of right-sided hemiparesis with increase in reflexes specimen included the invaded portion of the skull and no mention is made of its intracranial volume. The patient was a 72-year-old recluse with a 7-year history of frontal swelling, 5 years of deterioration of mental faculties, and 2 years of weakness in the left arm with epileptic seizures.