Incisel Meningiomas of the Falco-Tentorial Junction

A Report of Two Cases

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Reports of meningiomas arising from the tentorium at its junction with the falx are rare. In 1962 Sachs et al., reviewing other series as well as their own, found 11 incisural meningiomas arising from the falciotentorial junction, or Carrefour falcotentorial (C.F.T.), a term introduced by Talairach et al. We have 2 more such cases to report. The first was diagnosed by vertebral angiography, and the tumor successfully removed through a transtentorial approach. The second was discovered at autopsy in a patient with advanced carcinoma of the cervix, and suspected posterior fossa metastasis. These 13 cases are similar; moreover 5 of them died undiagnosed. If the level of clinical suspicion is sufficient to suggest vertebral angiography, the diagnosis can usually be definite.

Case Reports

Case 1. E.R., a 45-year-old woman, was admitted to the Neurosurgical Service of Pahlavi Hospital on March 5, 1965.

History. Her main complaints were progressively severe headache for 8 months and attacks of vomiting for 6 months. Three months before admission she developed dizziness of vision and occasional diplopia, and a burning sensation on the left side of the face and head, and diminished hearing in the left ear. She had been incontinent of urine for a short time but on admission had mild urinary retention. Ataxia had progressed rapidly for 2 months so that she had been unable to walk for the last 2 weeks.

Examination. The patient was slightly confused but cooperative. She had bilateral papilledema. There was partial nerve deafness on the left and partial trigeminal sensory loss, including an absent corneal reflex. There was dysarthria and marked dysmetria and adiodykinesia of the right upper and both lower extremities. There was no nystagmus. Visual field showed a partial left homonymous hemianopsia. Upper and lower quadrants were equally affected. There was some diminution of sensation to pin prick in the left arm and trunk. Plain x-rays of the skull were normal. A right carotid arteriogram did not show any abnormality apart from slight hydrocephalus. In the phlebogram the vein of Galen and straight sinus were not visualized.

Vertebral angiography (Figs. 1 and 2) showed a large, well-vascularized mass in the midline about 2/3 cm. posterior to the basilar artery. The posterior cerebral and superior cerebellar arteries were larger than normal. Many small arteries from these main vessels supplied the tumor. The posterior cerebral and superior cerebellar arteries were abnormally separated. A diagnosis of incisural meningioma, presumably arising from the falciotentorial junction, was made.

Operation was performed with the patient in a prone position under intratracheal general anesthesia with moderate hypothermia (20°C). A right occipital bone flap was turned down. We chose the right side in spite of the left-sided facial pain and deafness. Since she already had a left homonymous hemianopsia, we feared that any unpredictable damage to the left occipital lobe might cause blindness. The medial edge of the flap was on the sagittal sinus and the inferior border on the lateral sinus.

The dura was opened along the upper border of the lateral sinus and hinged medially on the sagittal sinus. All veins entering the lateral and sagittal sinuses from the right occipital pole were clipped and severed. The occipital lobe was retracted from the tentorium and falx until the edge of the tentorium was reached. At this point a small part of the tumor could be seen above the level of the tentorium.

An incision was made in the tentorium 1 cm. lateral to its junction with the falx, and extended anteriorly through the tentorial edge just lateral to the midline. Tumor attachment to the tentorial edge was carefully dealt with by endothermy. The medial cut edge of the tentorium was fixed by two silk sutures and used for retraction. The tumor then became clearly visible. Small arteries around about three quarters of the tumor were coagulated and cut. The mass could then be removed in small pieces. Thus the whole tumor was removed. Its attachments to the tentorium in the midline were thoroughly cauterized. The opening in the tentorium was not sutured.

Histological Report. Sections were stained with H & E and showed a highly cellular and vascular tumor. There were many large vessels and capillaries with only 1 endothelial layer. Tumor cells contained round and oval nuclei with a considerable amount of cytoplasm. A diagnosis of angiomatous meningioma was made.

Postoperative course was uneventful. For about 2 weeks facial paresthesia was worse than before the operation, but gradually improved. When discharged, the patient still complained of some facial discomfort. Hearing returned to normal about 4 weeks after the operation. Ataxia gradually improved and after 2 months there was practically no cerebellar sign. There was no change in the visual fields.

Case 2. E.G., a 45-year-old woman, was also admitted to the Neurological Service of Pahlavi Hospital with a history of headache, ataxia, right-sided deafness and facial numbness. Eighteen months previously she had been treated with radiotherapy for an advanced carcinoma of the cervix. Although she had been suffering from slight headaches for a year, the attacks had only
become severe in the last 4 months. In the last 2 months she had developed steadily increasing giddiness and ataxia with tinnitus and diminished hearing on the right side. For the last 3 weeks she had had difficulty in swallowing fluids, numbness in the right side of the face, and had lost considerable weight.

**Examination.** The patient was thin and emaciated and had bilateral papilledema. Nystagmus, diminished sensation of the right side of the face and diminished right corneal reflex were present. There was severe ataxia with no lateralizing cerebellar sign. Plain x-rays of the skull and carotid angiography were normal.

The CSF pressure at lumbar puncture was 240 mm.; CSF protein was normal. The normal protein content and normal size of internal auditory meatus ruled out the diagnosis of an 8th nerve neurinoma.

Pneumoencephalography was attempted, but there was no filling of the ventricles. The patient died 24 hours after this procedure because of respiratory failure.

**Autopsy Findings.** There was a large carcinoma of the