INFARCTIONS SIMULATING BRAIN TUMOURS IN THE POSTERIOR FOSSA

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It has long been recognized that occlusions of the internal carotid artery and its branches may cause circulatory disturbances in the involved area of the brain, resulting not only in malacia and atrophy, but also temporarily producing oedema. In the first days after the accident this may cause increased intracranial pressure.

In these cases a diagnosis of intracranial haematoma or other type of expanding lesion has been made not infrequently, and the patients have sometimes been operated upon, usually without preoperative arteriograms.

In the posterior fossa, expanding lesions often have to be treated acutely. A pneumoencephalogram or a ventriculogram may have established the expanding nature of the lesion. Vertebral angiography is more rarely performed. Recently we had 2 patients demonstrating the difficulties in diagnosing the true nature of the expanding lesion; 1 of these was, however, suspected of having a vascular occlusion before the operation was performed.

CASE REPORTS

Case 1 (050716/55 S.S.). A 50-year-old man, previously healthy, first complained of pain and numbness of his left arm in the middle of October 1955. He improved following roentgen-ray treatment. On Nov. 18, 1955 he began to have occasional dizziness, nausea and vomiting, and the following day there was onset of headache in the right parieto-occipital region.

He was examined in another hospital on Nov. 21, 1955. Blood pressure was 140/60. There was slow nystagmus on gazing to the left. Sensibility was normal. Babinski sign was positive—? bilaterally. Lumbar puncture revealed normal spinal fluid under normal pressure. That night the patient became disoriented and restless. The next morning he was drowsy, and did not answer but reacted to painful stimuli. He was admitted to our hospital on Nov. 22, 1955.

Examination. Blood pressure was 170/95. He was sometimes able to answer "yes" and "no" and to move all extremities spontaneously with full power. There was extreme conjugate deviation of the eyes to the right. Pupils were normal, the right pupil sometimes being slightly larger. Fundi were normal. Abdominal reflexes were absent bilaterally. Babinski sign was positive on the right, and absent on the left. Roentgenogram of the skull and left carotid angiogram were normal (no filling of the posterior cerebral artery).

Course. His condition deteriorated, he reacted hardly to painful stimuli, and his breathing became shallow and irregular. Neurosurgical consultant suspected oc-

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clusion of the basilar artery, and after a cisternal puncture (no cerebrospinal fluid obtained) an unsuccessful attempt was made to perform vertebral angiography. Then ventriculography showed normal lateral ventricles, but the Sylvian aqueduct was filled only to the extent of a few mm. from the 3rd ventricle (Fig. 1).

Operation. On Nov. 22, 1955, under nitrous oxide-oxygen anesthesia, exploration of the posterior fossa was performed with removal of the arch of the atlas. The dura mater was very tense in spite of a ventricular puncture. When the dura mater was opened the gyri of the left cerebellar hemisphere appeared flattened and broadened, and the surface of the medial inferior area “exploded” with emptying of a yellow-white porridge-like substance (Fig. 2). The malacic cavity was about the size of a plum. Biopsy showed only malacia.

Course. Half an hour after the operation, when the patient was turned in his bed, he suddenly expired.

Autopsy. Pulmonary emboli from a femoral venous thrombosis were revealed as the cause of death. Four small ulcerations in the ventricular mucosa were found. There were remnants of the left cerebellar hemisphere in the medial, superior and anterior regions, surrounding the operative cavity as a shell. Part of the left tonsil was also destroyed and there was a pressure cone on the right side. There were no signs of tumour; the medulla and pons were normal. The posterior inferior cerebellar artery and the vertebral artery on the left side were thrombosed (Fig. 2). The anterior inferior cerebellar artery was a little smaller on the left than on the right side.

Microscopical examination revealed oedema in the “lateral medullary area” below the restiform body.