Meningioma and intermittent aphasia of 44 years' duration

Case report

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Meningiomas not only have varied biological properties but also give rise to a wide spectrum of neurological signs and symptoms. This report concerns a patient who had unusual manifestations for 44 years.

Case Report

The patient, a 74-year-old right-handed woman, was admitted with a 1-day history of fever, cough, and shortness of breath. Two days before admission she had been found on the floor of her home in a confused state but conscious. The patient had been in good health until age 30, when she developed recurrent episodes of confusion during which she became dazed and experienced feelings of depersonalization in which she felt that her "heart was beating outside" her body. These and similar bizarre aura were followed by paresthesia and weakness of the right hand which spread to the face and right arm and were either accompanied or followed by global aphasia. There was no loss of consciousness. Occasionally the paresthesia would spread to the left arm and legs but convulsive movements did not occur. Aphasia would persist usually for 1 or 2 hours and rarely for as long as 24 hours. Recovery of motor and sensory function was always complete, and her speech remained unaffected during the interictal periods. Until age 47 her attacks were infrequent, averaging about one per month. At that time she experienced a marked increase in the frequency of seizures to three or four times a week. Treatment with phenobarbital, 60 mg daily, achieved some reduction in the number of attacks but complete control was not possible. When she was 59, an electroencephalogram revealed frequent sharp waves in the left temporal and frontal areas in addition to bursts of slow waves. Dilantin, 100 mg daily, was added to her treatment without appreciable benefit. Frequent attacks of aphasia continued in association with focal motor and sensory symptoms, but at age 65 the patient for the first time experienced two generalized major tonic-clonic convulsions with loss of consciousness. Over the next few years she had a slight decrease in the frequency of her aphasic attacks to three or four per month until the time of her hospitalization.

Examination. On admission the patient, a thin, elderly woman, was dyspneic and cyanotic. She was conscious but did not answer questions. Blood pressure was 106/60, pulse 100, temperature 104. Bilateral rales were heard on auscultation of the chest. Fundoscopic examination demonstrated a small area of old chorioretinitis in the right eye but no papilledema. Visual fields were full, and the remainder of the cranial nerves were intact. Generalized weakness was present, but there were no focal motor deficits. A
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reliable sensory examination could not be performed. Except for an increased right knee jerk, the tendon reflexes were unremarkable. Plantar responses were flexor bilaterally. An electrocardiogram demonstrated acute anteroseptal infarction. The remainder of the laboratory data was noncontributory.

There was an initial favorable response to treatment with antibiotics and intravenous fluids, but during the convalescent period the patient had a sudden recurrence of respiratory distress. Progressive deterioration then occurred, and the patient died from heart failure.

Postmortem Examination. There was bilateral bronchopneumonia, infarction of the right lower lobe of lung, thrombosis of the right lower lobe pulmonary artery, and occlusive arteriosclerosis of the left circumflex and right coronary arteries. A bulging, lobulated, firm tumor, 5.5 cm in diameter, was found in the left postcentral sulcus overriding the postcentral gyrus and compressing the precentral and superior temporal gyri (Fig. 1). The tumor depressed the substance of the brain parenchyma 3 cm and protruded above the surface 1 cm. The tumor could be easily separated from brain tissue with no suggestion of invasion. The cerebral convolutions contiguous to the tumor were distorted but the brain was not edematous. Uncal and cerebellar herniation was not present. Vertebral and basilar arteries showed marked arteriosclerosis and plaque formation, but vessel lumina were not narrowed.

In coronal sections, the left lateral ventricle was slightly smaller than the right with a slight degree of dislocation to the right.

There was no herniation of the cingulate gyrus. Dura and leptomeninges in other parts of the brain were grossly unremarkable.

Microscopically, there was no hemorrhage or necrosis in the tumor, which was composed of tightly packed sheets of cells uniform in size and shape with abundant cytoplasm; the cells appeared to be of arachnoid cell origin. Whorl formation could be seen in several areas, and psammoma bodies were dispersed throughout the tumor, completing the histological picture of a typical meningioma (Fig. 2). Invasion of brain tissue was not seen, but adherent rim of underlying white matter exhibited evidence of pressure atrophy and necrosis with loss of myelinated fibers and prominent astrocytosis.

Discussion

The classical symptoms of meningiomas are those of unremitting and progressive neurological impairments produced by an expanding intracranial mass, although progression may often be very slow. In contrast to this expected clinical picture, meningiomas infrequently produce an apoplectic onset of symptoms in which the tumor masquerades as cerebral thrombosis. Daly et al., and Okihiro, et al., presented evidence that meningiomas also may produce unusual intermittent manifestations.

FIG. 1. Lateral photograph of brain demonstrating a meningioma in the left postcentral sulcus.

J. Neurosurg. / Volume 33 / July, 1970

FIG. 2. Photomicrograph of tumor showing whorls and psammoma bodies, H. & E., ×120.