
TWO TUMORS, MENINGIOMA AND GLOBLASTOMA MULTIFORME, IN ONE PATIENT

EMANUEL H. FEIRING, M.D., AND LEO M. DAVIDOFF, M.D.
Neurosurgical Service, Montefiore Hospital, New York, N. Y.

(Received for publication November 20, 1946)

A number of reports dealing with multiple intracranial tumors is available in the literature. If one excludes those cases that properly belong in the category of von Recklinghausen's disease, the occurrence of such multiple tumors is decidedly infrequent. Out of a total of 295 cases, Cushing and Eisenhardt report but 3 instances of more than one meningioma in the same individual. An incidence of 1 in 75 cases is recorded by Frazier and Alpers. Somewhat higher is the figure listed by Horrax, 4 multiple meningiomas in a series of 60. Other such cases have been reported, most recently by Arieti and by Mufson and Davidoff. The reader is referred to these papers and to the monograph of Cushing and Eisenhardt for a more detailed perusal of the literature.

Multiple gliomas are also not unknown. Bailey and Cushing found such cases in their collection of gliomas, one a pinealoma and a glioma of the optic chiasm, the other a
MENINGIOMA AND GLIOBLASTOMA IN ONE PATIENT

pinealoma and a medulloblastoma. Courville\(^1\) collected 113 recorded cases and added another 21 of his own. It is worthy of mention also that of the 16 cases of spongioblastoma multiforme described by Globus and Strauss\(^2\) in 1925, 6 had multiple centers of growth.

Least frequent in occurrence are multiple tumors of both glial and meningeal origin. Reference is made by Cushing and Eisenhardt\(^3\) to the existence of glial tumors in association with central neurinomatosis and multiple meningiomas. In addition, among their group of peritocular meningiomas, is included one case with a concomitant glioblastoma of the corpus callosum. In a case reported by Myerson,\(^4\) 6 tumors were found on the right side of the brain. Two of these were meningeal and 4 glial in origin. The occurrence of an angioblastic meningioma and an astrocytoma in one case and of a meningothelial meningioma and an astrocytoma in another is described by Arieti.\(^5\) Recently Kirschbaum\(^6\) has reported an intrasellar meningioma, an unusual finding in itself, coexisting with multiple gliogenous tumors.

The case to be described is another instance of multiple intracranial tumors of varying origin. Not only did it prove interesting because of the rarity of the combination but also because of the unusual sequence of events which led to the recognition of both tumors during life.

CASE REPORT

A. W., Montefiore Hospital 440836. Removal of a right frontal menigioma in a 58-year-old woman, with failure to improve postoperatively. Accumulation of cerebrospinal fluid under scalp at site of operation, mental deterioration, recurrence of increased intracranial pressure. Pneumencephalographic evidence of a left cerebral lesion. Operation and verification of a left frontal infiltrating glioma.

History. A 58-year-old white female was admitted to the hospital on April 19, 1946, because of headache of 15 months' duration. Her only other complaint was blurring of vision of the left eye. This symptom had been present for about 2 months prior to admission. The patient was right-handed.

Examination. The neurological examination was negative except for haziness of the optic nerve heads. She appeared mentally dull but was fully oriented and showed no gnostic or speech disturbances.

Laboratory Data. Roentgenograms of the skull showed a hyperostosis frontalis interna, also atrophy of the sella turcica, indicative of increased intracranial pressure. Electroencephalographic studies revealed evidence of a generalized disturbance with definite abnormalities in the distribution of the anterior cerebral arteries bilaterally, more on the right than the left. This was thought to be compatible with a deep-seated frontal lesion, though the pattern was also in keeping with vascular changes in the areas supplied by these vessels. As a further diagnostic aid, ventriculography was performed, revealing a displacement of the ventricular system to the left, with downward displacement of the anterior horn on the right (Fig. 1). These findings pointed to a tumor in the right frontal lobe.

Operation 1. On April 25, 1946, under avertin endotracheal anesthesia, a right transfrontal craniotomy was performed. An encapsulated neoplasm, evidently meningeal in origin, presented itself at the tip of the frontal pole. It extended from the inferior margin of the falk to the superior longitudinal sinus. Through a small hole in the falk, normal brain could be visualized on the opposite side, indicating that the tumor did not pass beyond the midline. It was completely removed, as was also an area of hyperostosis.

Histology. Microscopic examination (Fig. 2) revealed a parenchymatous meningioma. The tumor consisted of elongated and polyhedral cells with oval vesicular nuclei closely packed and showing a parallel arrangement. Occasional deeply stained nuclei were present. Some whorl formations were also noted. There were numerous venous sinuses throughout the tumor. Sections stained by the Van Gieson method showed a small amount of connective tissue, perivascular in distribution. Examination of the hyperostosed bone overlying the neoplasm showed that the growth had extended into it (Fig. 3).

Course. The postoperative course was not unusual until the 6th day, at which time an accumulation of fluid under the scalp at the site of the flap was noted. This was aspirated and