Recurrence of an excised cavernous hemangioma in the opposite cerebral hemisphere

Case report

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Intracranial cavernous hemangiomas are relatively rare lesions. It is particularly unusual for a patient with this lesion to subsequently have a second lesion in a different part of the brain.

Case Report

This Italian boy was first seen in 1965 at age 15 when an intraventricular cavernous hemangioma of the right lateral ventricle was demonstrated angiographically (Fig. 1) and removed. He was followed periodically by the author. The only postoperative problem was infrequent grand mal seizures for which he was placed on Dilantin and phenobarbital therapy. His mental and physical development proceeded normally, and he graduated from high school at age 18 with average marks.

In March 1968 he complained of a few headaches which were not very severe. Neurological examination did not reveal any abnormality; there was no papilledema. An electroencephalogram (EEG) done at that time showed there was slow wave focus in the right frontal region, which was considered compatible with the surgical interference in that area. A new finding was some abortive paroxysmal activity in the left frontal region. A brain scan performed in September 1969 showed an area of slightly increased uptake in the left frontal region. There was no evidence of any increased uptake in the region of the previous lesion.

Examination. In January, 1969, the patient again complained of headaches and dizziness, and was hospitalized. Neurological examination revealed that he had bilateral papilledema. Bilateral carotid angiography (Fig. 2) demonstrated an avascular mass in the left frontal region. There was no evidence of recurrence of the previous lesion.

Operation. On January 15, 1969, a left frontal craniotomy was performed, and a very large lesion was encountered in the left frontal lobe. The gross appearance was that of an encapsulated mass with dark brown solid tissue inside it. There were numerous areas of hemorrhages both recent and old. The total size of the tumor was approximately that of a tennis ball. The lesion was removed almost completely.

Postoperative Course. Recovery was smooth. The patient was discharged home in good condition and had had no grand mal seizures up to the time of the last check-up in December, 1969. The papilledema had resolved completely.

Pathological Report. The specimen consisted of three portions. Two of these were
the separated inner and outer linings of what was thought to be a cyst of 2 cm in diameter. The third portion also had the appearance of a cyst 4 cm in diameter. The surface was smooth and slightly lobulated; the wall was thin and fibrous, and the lining was smooth but largely covered by a layer of adherent blood clot. Microscopically, the "cyst" wall showed a structure composed largely of collagen. A layer of blood clot lined most of the inner surface, and this showed evidence of organization and fibroblastic proliferation. Scattered macrophages filled with hemosiderin lay within the wall. In some areas the thickened wall was replaced by a network of vascular channels filled with red cells and lined with endothelial cells. Many of these smaller vessels were surrounded by a loose stroma containing moderate numbers of reticulin fibers. The gross and microscopic characteristics were those of a cavernous hemangioma (Fig. 3 upper left and right).

Comparison with the 1965 operative specimen (Fig. 3 lower left and right) showed that specimens were practically identical in every detail, both showing thickened walls, sometimes replaced by vascular channels. The 1969 specimen showed a slightly more prominent cavernous type of architecture.

**Discussion**

The patient had done well after removal of the intraventricular cavernous hemangioma in 1965. Follow-up examinations were mostly directed toward the possibility of recurrence of this lesion. When he did show another abnormal focus in the left frontal lobe, investigations were delayed as it was considered unlikely that he could be devel-
Recurrent cavernous hemangioma

Fig. 3. Upper Left and Right: Photomicrographs of the lesion (1969) showing the collagenous cyst wall with scattered macrophages filled with hemosiderin, a network of vascular channels filled with red cells and lined with endothelial cells in the thickened portions of the wall, loose stroma around some of the smaller vessels containing reticulin fibers, and a layer of blood clot lining the inner surface of the cyst showing evidence of organization and fibroblastic proliferation. Wilder reticulum stain, × 150. Lower Left and Right: Photomicrographs of previous lesion (1965) showing similar details. H. & E., × 150.
oping a second lesion in the opposite hemisphere. Repeat angiography finally showed an avascular mass in the left frontal lobe. Radiologically this resembled the intraventricular avascular lesion in the right lateral ventricle. There was no change of vascular pattern around the area of ring-like calcification in the left parietal region.

At the time of surgery in 1965 there was no radiological or clinical evidence that the patient had a hemangioma in the left frontal lobe. It seems possible, however, that a small undetected lesion may have grown over a period of a few years and that further hemorrhages in this lesion caused the increased intracranial pressure.

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Summary

We have reported the case of a patient who had a cavernous hemangioma removed from the right lateral ventricle in 1965, and who developed a similar lesion in the left frontal lobe in 1969. This was successfully removed, and the patient made a good recovery.

References


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