Oligodendroglioma: A 40-Year Survival
Case Report

MELVILLE ROBERTS, M.D., AND WILLIAM J. GERMAN, M.D.
Department of Neurological Surgery, University of Virginia School of Medicine, Charlottesville, Virginia and Department of Surgery, Yale University School of Medicine, New Haven, Connecticut

In 1924 Bailey and Hiller suggested that there might exist a variety of glioma composed primarily of oligodendrocytes. Bailey and Cushing first described an oligodendroglioma in 1926. A detailed description of the clinical and pathological characteristics of the tumor was later published by Bailey and Bucy. Since then there have been numerous studies reporting survival time of patients with oligodendrogliomas. The longest survival reported was 35 years, although the diagnosis was unverified histologically until craniotomy 9 years before the patient’s death.

Case Report

First Admission. A 15-year-old boy was admitted to the neurosurgical service of the Peter Bent Brigham Hospital on July 23, 1929, with a chief complaint of headache during the past 1½ years. He had been referred by Dr. Foster Kennedy of New York.

History. Early in 1928, at the age of 14 years, the patient, who previously had been in excellent health, began to have mild, generalized headaches. Within a few months the headaches were accompanied by vomiting, which occurred at intervals of 1 week, and lasted approximately half a day. One year prior to admission he noticed a mild tremor of the right hand, present only when the hand was being used. The tremor gradually increased in severity, making it necessary for him to use his left hand almost exclusively. At rest the tremor promptly disappeared. Six months before admission he became aware of a buzzing noise in both ears and suffered transient attacks of diplopia and blurred vision. During the month preceding admission he noted a loss of visual acuity while looking in a particular direction; however, he was not certain whether it was to the right or left.

Received for publication January 24, 1969.
Second Examination. Upon admission on May 22, 1930, the patient was slow to respond to questions or commands. The left subtemporal decompression was tense and bulging. There was a left abducens paresis, papilledema bilaterally, and secondary optic atrophy. Tangent screen testing showed a right homonymous hemianopia. A mild right hemiparesis, right supranuclear facial weakness, and intention tremor of the right hand were noted. The deep tendon reflexes on the right were hyperactive. X-ray films of the skull showed further thinning and increase in digital markings of the calvarium. The bone flap was displaced outward, and the sella turcica appeared shallow. The posterior clinoids were eroded. The calcified mass seen previously was unchanged.

On June 5, 1930, a ventriculogram showed severe ventricular dilatation. The calcified tumor was located along the upper medial edge of the left temporal horn between it and the dilated ventricle.

Second Operation. On June 6, 1930, Dr. Cushing, assisted by Dr. Horrax, re-elevated the left temporal osteoplastic flap and exposed the cystic tumor through the left temporal horn. The tumor was needled, and 30 cc of xanthochromic syrupy fluid removed. The tumor was completely excised, including its medial portion that had extended into the third ventricle. Histologic examination of the neoplasm revealed a typical oligodendroglioma.

Second Postoperative Course. There was total aphasia and a profound right hemiplegia. Intermittent fever up to 104.2°F was also present. The patient’s condition gradually improved, and he was discharged July 13, 1930, only to be readmitted on August 14, 1930 because of intermittent fever to 102°F. No cause for the fever was ever discovered, and he was discharged 2 weeks later.

One year after discharge from the hospital he returned to high school and was graduated. He has successfully managed his own oil distributing company for many years, and leads an active life. Recent neurological examination disclosed no abnormalities except for a slight occasional hesitancy of speech, a mild right spastic hemiparesis, and right homonymous hemianopia.

Discussion

This case presents a number of unusual features. Although oligodendroglioma is a relatively slow-growing neoplasm, the length of survival far exceeds the usual expectancy. In reviewing 200 cases, Earnest, et al., found that the average time between the onset of the first symptom to the time of death was 7.5 years. Roberts and German, in an analysis of 50 cases, reported 8.5 years as the average length of survival after development of the first symptom.

The average postoperative survival for oligodendroglioma, depending on the series cited, varies from a short 21 months to a lengthy 7½ years. The average postoperative survival seems to be 5.6 years, which is significantly longer than that for glioblastoma multiforme.

Summary

We have reported the case of a patient with an oligodendroglioma of the left temporal lobe and third ventricle who has now survived 40 years after the onset of symptoms and 39 years since the initial craniotomy. The patient is still living and well.

Acknowledgment

The authors wish to thank Dr. E. E. Manuelides for his help in reviewing the histologic sections of the tumor.

References

Oligodendroglioma: A 40-Year Survival


