Case Report

Report of Two Brain Cancer Cases with Survey more than 15 Years

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Abstract

Brain tumors are considered in regarded to their size, position and aggressive manner. Brain tumors cause several neurologic symptoms. For instance, they increase intracranial pressure due to local damage and displacement of surrounding tissues. In this paper, two glioblastoma multiform cases with more than 15 year- survival have been reported.

The first patient was a 52 year- old woman who suffered from seizure. The CT scan demonstrated a focal low density in the left temporoparietal lobe, and Carbamazepine was prescribed. However, after 12 years, the patient started to suffer from seizures with transient awareness repletion and vomiting. Therefore, daily injection of 16 mg of dexamethason in two divided dosages was prescribed. Fourteen years after illness, biopsy with stereotaxy method was used and glioblastoma multiform was diagnosed by a pathologist. Unfortunately, this patient died due to progression of her illness 16 years after beginning of the seizures.

The second patient was a 47 year- old man who also suffered from seizure. In the CT scan, a low density lesion was observed in his left parietal lobe. The patient was treated with 400 mg of Carbamazepine per day in two divided dosages. Dosage of drug was increased to 1200 mg per day. After one year, due to drug resistance, Phenytoin and Phenobarbital were also added to Carbamazepine because of repeated seizures. After 15 years, the soberness disorder of the patient increased and CT scan was repeated. However, due to increase in the tumor size, hydrocephaly surgery was performed and the pathologist reported glioblastoma multiform. Following the surgery, radiotherapy and chemotherapy were also used. This patient is in a good condition now and he has no serious problems. Glioblastoma multiform is a high degree astrocytic tumor. In this paper, two patients who were afflicted with glioblastoma multiform in fourth and fifth decades of their life were presented. The life span of these patients is considerable in contrast to several articles which indicated that a- five -year life span is rare in patients with glioblastoma multiform.

Key words: Brain tumor; Glioblastoma multiform; Seizure

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Introduction

Brain tumors are considered in regarded to their size, location and invasive qualities. Annual epidemic of CNS tumors is different from 10-17 cases in 100 thousands for intracranial tumors and 1-2 cases for intraspinal tumors. About half of these cases of CNS tumors are primary tumors and others are metastatic tumors. Some adults' tumors are in brain hemispheres and supratentorial regions. Tumors cause local damage and displace surrounding tissues; and therefore, cause several neurologic symptoms such as increasing intracranial pressure. Most of these tumors are fetal .However, even with the progression of anesthesia, stereotaxy, microscopic surgery techniques, radiotherapy and use of chemotherapy, this condition will rarely change.

1. First case

The first patient was a 52- year- old woman who referred to a physician with a main complaint of seizure in 1992. Her seizure was generalized as tonic colonic and no organic neurologic sign was observed in her physical exam. There wasn't any seizure background in the patient's family and no pupil edema. The CT scans showed a focal low density and nonhomogenus lesions in the left

temporoparietal lobe, with a little sign of pressure in the surrounding tissues. There wasn't any risk factor for CVA and the patient did not have any illness background.

She didn't accept the suggestion of advanced diagnostic procedure; therefore, 400 mg of carbamazepine was administered in two divided dosages.

After a year, seizure was repeated following an intensive muscle activity and fatigue. However, the patient did not use increased dose of the administered drugs. However, due to repeated seizures with this condition from the second year of illness, the dosage of drug was increased to 500mg, and she did her daily activities and also heavy works of farming. After 12 years, the patient started to suffer from mild seizures such as short attacks of impaired consciousness and speech disorder in a brocas' dysphasia ,and sometimes she lost her appetite and vomited. Therefore, daily injection of 16mg of dexamethason in two divided dosages was administered. Then, her health condition did improve and dexamethason was discontinued. Fourteen years after starting the illness, the patient started to suffer from movement disorder, right hemiparesis and stayed at home. She then accepted biopsy with stereotaxy method, and glioblastoma multiform was diagnosed by pathologist. After stereotaxy, intracranial hemorrhage was brought about and her mood became serious. The evacuation of hematoma and excision of tumor was done, and the biopsy of the completed tumor excision was reported as glioblastoma multiform. The patient's condition improved with physiotherapy and drug therapy, but she died in 2008 due to progression of illness, impairment in consciousness, aspiration pneumonia, pulmonary and urinary infection.

2. Second case

The second patient was a 47 -year- old (male) teacher. He also referred to a physician with a chief complaint of seizure in 1992. His seizure was focal with second generalization that started with right hand tonic seizure. There was not any organic neurologic sign in the physical exam; and there was no seizure background in the patient's family and there was not any pupil edema. The CT scan showed a focal low density and nonhomogenous lesion in the left temporoparietal lobe, with a little sign of pressure in the surrounding tissues (there wasn't any risk factor for CVA and the patient didn't have any illness background).

The patient didn't accept the suggestion of advanced diagnostic procedure; therefore; 400mg of Carbamazepine was administered in two divided dosages.

After one year, seizures showed resistance against the drug; therefore, dosage of the current drug was increased to1200 mg per day. Because of repeated seizures, Phonation and Phenobarbital were also added to Carbamazepine. With poly therapy and adding drug dosage, the patient's seizures continued in the form of mild seizures like short attacks of impaired consciousness. He didn't accept the operation and continued teaching. After 15 years, the soberness disorder of this patient increased, and CT scan was repeated. However, due to increase in the tumor size and hydrocephaly, surgery was performed and glioblastoma multiform was diagnosed by a pathologist. Following the surgery, radiotherapy and chemotherapy were also used. This patient is in a good condition now and has no serious problems as the antiepileptic drugs dosage was decreased and his seizures are controlled.

Discussion

Many types of tumors, both primary and secondary, occur in the cranial cavity and spinal canal. Some of the tumors such as the craniopharyngioma, meningioma and schwannoma have a disposition to grow in particular parts of the cranial cavity and to cause certain syndromes. The growth rates and invasiveness of tumors vary e.g. the glioblastoma, being highly malignant, invasive and rapidly progressive and others like meningioma being benign, slowly progressive and compressive. These pathologic peculiarities are important to determine the prognosis after surgical excision [1]. In the current paper, two cases of glioblastoma multi form with the survival of more than 15 years were reported.

There are some certain peculiarities in CNS tumors that distinct them from other parts of the body. Firstly, in CNS, the border between malignant and benign tumors isn't clear. For example, some glial tumors with peculiarities of benign histology and low mitosis, homogenous cells and low development may become infiltrated in a vast area of brain and cause severe nervous defect and bad prognosis. Secondly, the ability of glial neoplasm surgery will hurt the tense action due to the infiltration of these tumors. Thirdly, the anatomic location of neoplasm, apart from the type of tumor, can have lethal effects. For example, a benign meningioma near medulla oblongata can lead to apnea, and stop the heart and cause death [2, 3].

The invasion of primary CNS neoplasm is different from other tumors. Even the worst malignant gliomas seldom metastasis out of CNS. The best place of tumor invasion is sub arachnoids space. As a result, anaplastic tumors and well differentiated neoplasms can disseminate in other sites of the brain and spinal cord, only when they enter into C.S.F space.

Gliomas and fibriler astrocytoma and G.B.M with 80% prevalence are the most widespread CNS parenchyma primary tumors in adults. These tumors occur in brain's hemispheres and often in the fourth and sixth decades of life. The patients who have G.B.M have a very bad prognosis. With today's remedies with the composition of surgery, radiotherapy and chemotherapy, the average life span after diagnosis is 8-10 months and less than 10% of patients will be alive after two years. However, some articles have indicated that five years life span is rare in these cases. Moreover, the life span of old people is much lower. Thereby, the average life span in well differentiated astrocytoma is more than five years [4, 5].

Asterocytic tumors cause infiltration in brain parenchyma and in W.H.O classification; they are categorized as a disseminated infiltran asterocytoma. These tumors are divided in to three types of tumors according to cytology distinguishing features as fibroplasias, jemostocytic and protoplasmic. Asterocytic fibroplasias tumors are the most frequent asterocytoma according to WHO categorization and are divided to 3 types: diffious or grade II asterocytoma, asterocytoma, anaplastic or grade III asterocytoma and glioblastoma multiform or grade IV.

It has been reported that in U.S.A, 400000 people died because of cancer; and of them, 12000 died because of primary tumors. However, among them 100000 brains of the patients were involved in the time of death. Therefore, brain and its covering curtion were involved in 25% of cancer patients in the illness process. Among the death causes due to intracranial illness, tumors are in the second level after stroke. (Annual incidence of whole brain tumors are 46 in 100000 ,and primary tumors 15 in 100000, about 17500 primary brain tumors were recognized in 1996 except for pituitary, s tumors) [1].

Conclusion

Glioblastoma multiform in high grade situation will transit to asterocytoma. However, those gliomas with low differentiation that have significant oligodendroglial or ependimal differentiation are not categorized as glioblastoma multiform. Anaplastic or grade III asterocytoma are often created from a good primary differentiated tumor. Therefore, the morphologic evidences at the progression of tumor from good non differentiated damage to differentiation form could be observed. Glioblastoma multiform or grades VI in WHO categorization are cellular tumors with high mitosis and micro vascular hyperplasia and tumoral coagulation necrosis, this necrosis status is surrounded by tumoral cells which called palisat necrosis.

In the present paper, two patients were reported with glioblastoma multiform in the fifth and sixth decades of their life. The life span of these patients was over 15 years, which was different from what was reported by several articles that indicated that a -five- year life span is rare in patients with glioblastoma multiform.

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Conflict of Interest

There is no conflict of interest.

Authors' Contribution

NKH and TDM designed the study, presented and monitored cases analyzed the data and prepared the paper. TYSA and BA carried out the pathological evaluation and literature review. ERH contributed the surgical performance.

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