

## A Mini-Review on Brain Tumor and its Diagnosis

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### ABSTRACT

A brain tumor refers to the abnormal development of the cells inside the skull or brain. Some tumors are known as benign and some tumors are known as malignant. Tumors growth can occur from the tissues of brain it and this is called primary and cancer from the various parts of body can expand to brain which called metastasis. The treatment of the brain tumor depends upon the size of tumor, type of tumor and location of tumor. These treatment goals may be focus on relieving the symptoms or can be curative. About 120 types of the brain tumor have been treated successfully. Other new therapies are also improving the quality of life and life span for various people.

### What is brain tumor?

Growth of the normal cells occurs in manageable and controlled manner. During the normal growth, old cells damaged or new cells replace the old cells. In contrast to normal cells, tumor cells divide as uncontrollable cells which form clump of cells. Primary brain tumor is the cell growth abnormally and this does not expand to the other body parts and remain on the one place. This primary brain tumor is classified into two types. Primary brain tumor can be benign brain tumor or it can be malignant brain tumor. Both types of primary tumor depend upon the different conditions.

### Benign & Malignant Tumor

Benign brain tumor slowly grows and it has boundaries that are distinct and it spreads rarely. Although the cells of benign are not malignant types but this type can be life threatening if the cells of benign tumors are located on a vital area. On the other side, malignant brain tumor grows very quickly and its boundaries are irregular. This type spreads to near side areas of brain very quickly. This often called as brain cancer. But malignant tumor does not come in the definition of the cancer because these tumor cells do not expand outside the organs of spine and brain.

### Metastatic Brain Tumor

Metastatic brain tumor which also called secondary brain tumor begins in body as a cancer and then spread to the parts of the brain. These are formed when the cells of cancer are carried out in the blood stream. The most common types of cancers that spread to the brain are breast cancer and lung cancer. Whether the brain tumor is benign and metastatic, malignant, all the types are related to life threatening. Packed with in the skull which is bony, the brain cannot expand for making the room to provide growing mass. Therefore, tumor displaces and compresses the normal brain tissue.

### Effects of Brain Tumor

Some types of the brain tumor cause the cerebrospinal fluid blockage. This fluid flows and passes around and through the part of brain. Due to the blockage, pressure goes high and enlargement of ventricles occurs. Some types of tumors results in swelling. Pressure, size and swelling produce the effect of mass which results many of the signs

and symptoms. Many of the different types of the brain tumor exist. Each type of tumor has different causes that give different symptoms. Some tumors can be controlled easily while some tumors are life threatening and cannot be treated after properly medication.

### **Classification Systems of Tumor**

The world health organization has created the classification and system of grading to show the planning of treatment, standardized communication and outcomes for brain tumor. Tumors are usually classified according to the type of the cell, grade by visualizing the cells and sometimes by taking the biopsy under the microscope. A type of the cell refers to the origin of the tumor cell. For example, this includes support cells & support cells that forms the tumors. The primary brain tumor results from glial cells. There are various gliomas types because of different kinds of glial cells.

### **Grading System of Tumor**

Grading system was formulated by WHO which means to look the tumor cells by placing it under the microscope which is the sign of aggressiveness. Tumor cells often have the mixture of grade cells and these can modify as these cells grow. Different terms are used to explain the how tumor and similar cells appear and then make comparison to normal cells. These terms are anaplastic and differentiation. Medical sciences have no ideas that how brain tumor cause and how to prevent the primary tumor in brain that start. People have risk of brain tumor that has cancer in body elsewhere and prolonged exposure to chemicals and pesticides.

### **General Symptoms of Brain Tumor**

Tumors can affect the brain badly by causing the destruction of normal tissues, increasing the pressure and compressing the normal tissues. Symptoms of brain tumor vary and these depend upon the size of tumor, type of tumor and the location of tumor in the brain area. General symptom of brain tumors are seizure, headaches which become worsen in morning, feeling dizziness while walking, abnormal eye movements resulting in vision problems, increasing in pressure which results in nausea, vomiting, headaches, drowsiness and feeling weakness on the one side of the body part.

### **Specific Symptoms of Brain Tumor**

Specific symptoms of tumor are frontal lobe, parietal, occipital lobe, temporal lobe and brain stem. Lobe tumors of frontal may result by emotional and behavioral modifications, inhibition or motivation and impaired smell sense or loss of vision. Parietal lobe tumors can cause by lack of recognition, impaired speech, problems in drawing and writing. Tumors of occipital can result from vision loss in both or one eye and temporal lobe tumor may cause by difficult in speaking and drawing, memory problems. Brain stem tumors cause by changes in behaviour and emotions, hearing loss, difficulty while speaking and swallowing.

### **Diagnosis of Tumor**

According to the brain tumor association of America, about eighty thousands of people with primary brain tumor will be diagnosed. Consult with doctor for diagnosis and first doctor check the medical history of family and patient

itself and perform a complete examination of the patient. Hearing test, visual test, lumbar puncture test are done by doctor for examination of tumor. Besides these tests, imaging tests like CT scan and MRI are performed to check tumors. Biopsy can also perform to check which type of tumor is present or not. In this procedure, small tumor cells are taken and checked under microscope.

## REFERENCES

- 1- Qadir MI, Malik SA (2010) Comparison of alterations in red blood cell count and alterations in hemoglobin concentration in patients suffering from rectal carcinoma undergoing 5-fluorouracil and folic acid therapy. *Pharmacologyonline*, NI 3: 240-243.
- 2- Qadir MI, Noor A (2018) *Anemias. Rare & Uncommon Diseases*. Cambridge Scholars Publishing. Newcastle, England. ISBN: 978-1-5275-1807-0.
- 3- Qadir MI, Javid A (2018) Awareness about Crohn's Disease in biotechnology students. *GloAdv Res J Med Medical Sci*, 7(3): 062-064.
- 4- Qadir MI, Saleem A (2018) Awareness about ischemic heart disease in university biotechnology students. *GloAdv Res J Med Medical Sci*, 7(3): 059-061.
- 5- Qadir MI, Ishfaq S (2018) Awareness about hypertension in biology students. *Int J Mod Pharma Res*, 7(2): 08-10.
- 6- Qadir MI, Mehwish (2018) Awareness about psoriasis disease. *Int J Mod Pharma Res*, 7(2): 17-18.
- 7- Qadir MI, Shahzad R (2018) Awareness about obesity in postgraduate students of biotechnology. *Int J Mod Pharma Res*, 7(2): 14-16.
- 8- Qadir MI, Rizvi M (2018) Awareness about thalassemia in post graduate students. *MOJ Lymphology&Phlebology*, 2(1): 14-16.
- 9- Qadir MI, Ghalia BA (2018) Awareness survey about colorectal cancer in students of M. Phil Biotechnology at Bahauddin Zakariya University, Multan, Pakistan. *Nov Appro in Can Study*, 1(3): NACS.000514.2018.
- 10- Qadir MI, Saba G (2018) Awareness about intestinal cancer in university student. *Nov Appro in Can Study*, 1(3): NACS.000515.2018