

**Glioblastome Multiforme with an Encephalomalacic Appearance: A Case Report****ENSEFALOMALAZİK GÖRÜNÜMLÜ GLİABLASTOME MULTİFORME: OLGU  
SUNUMU**

**S.Kağan Başaraslan<sup>\*</sup>, Cüneyt Göçmez<sup>\*\*</sup>, Abdülkerim Gökoğlu<sup>\*\*\*</sup>, Ahmet Menkü<sup>\*\*\*\*</sup>**

*\*Mustafa Kemal University, School of Medicine, Neurosurgery Department, Hatay, Turkey*

*\*\*Dicle University, School of Medicine, Neurosurgery Department, Diyarbakır, Turkey,*

*\*\*\*Münif İslamoğlu State Hospital, Neurosurgery Clinic, Kastamonu, Turkey*

*\*\*\*\*Erciyes University, School of Medicine, Neurosurgery Department, Kayseri, Turkey*

**Özet**

GBM bilindiği gibi sık görülen ve en malign olan primer beyin tümörüdür. Cerrahideki tüm gelişmelere ve sonrasında kemoterapi, radyoterapi uygulanmasına rağmen kötü prognozu devam etmektedir. Radyolojik olarak heterojen kontrast tutma, yaygın çevresel ödem ve şift ile karakterizedir. Burada radyolojik olarak ensefalomalazi izlenimi veren ve literatürde oldukça nadir rastlanılan bir glioblastome multiforme olgusunu tanımlandı.

**Anahtar Kelimeler:** Encephalomalazi, Glioblastome Multiforme

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**Abstract**

Glioblastoma multiforme is the most common and most malignant primary brain neoplasm. In spite of all the advances in surgery, and applying chemotherapy and radiotherapy afterwards, the prognosis still remains poor. It is radiologically characterized by an appearance of heterogeneous mass with circumferential enhancement and diffuse edema. Here we describe a case of glioblastoma multiforme with imaging findings mimicking the encephalomalacia that is a very seldom condition observed in English Literature.

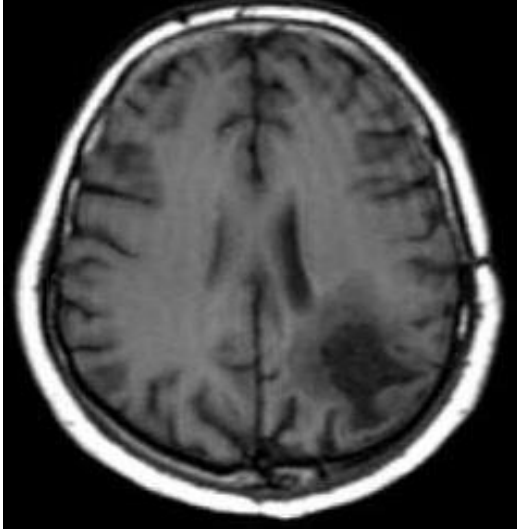
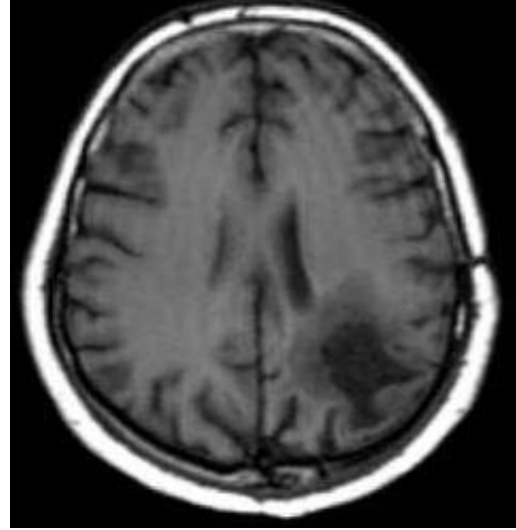
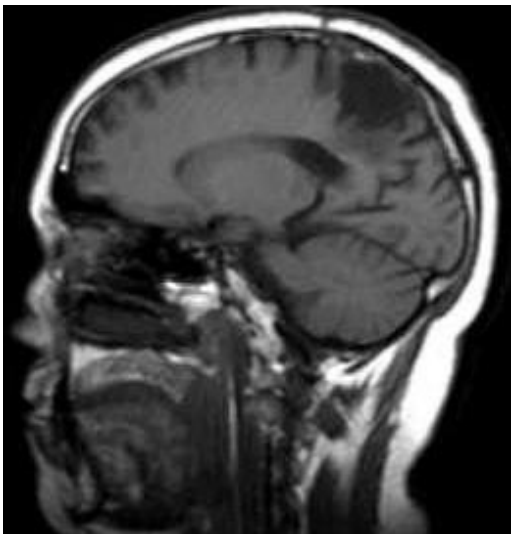
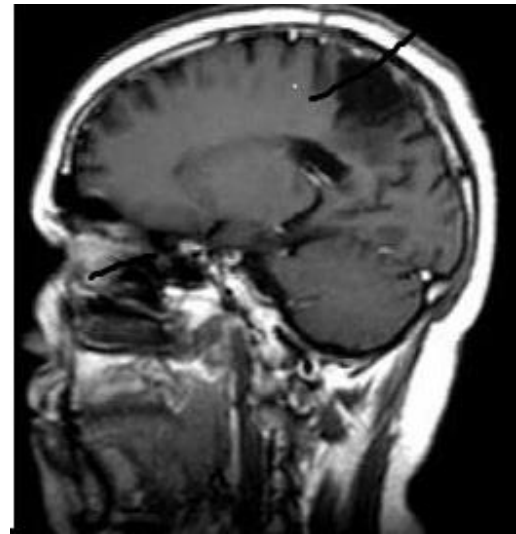
**Key Words:** Encephalomalacia, Glioblastome Multiforme

**INTRODUCTION**

Glioblastoma multiforme (GBM) is the most common and most malignant primary intracranial neoplasm accounting for %15 to %20 of all primary central nervous system tumors (1). Although imaging characteristics of GBM may be variable, it is easily identified by a pronounced mass effect and heterogeneous enhancement with centrally necrotic regions on MRI (2). But the appearance is not specific itself, as other lesions like abscess, metastasis may have a similar appearance (3). Encephalomalacia, also known as Cerebral softening, is a degenerative process of the brain in which changes are presumably secondary to hypoxic episode such as cerebral infarction, trauma, cerebral ischemia hemorrhage or inflammation (4). Unlike GBM, it does not usually require surgical treatment. For this reason, the case is presented here, which is misinterpreted as an encephalomalacia on the radiological report, to emphasize that the imaging of GBM is variable and not specific.

**CASE**

A 45-year-old female was admitted to the clinic with complaints of headaches and progressive numbness on the right arm. On radiological examination, There was a multicystic lesion embedded into the left post parietal lobe with no contrast enhancement, edema and shift effect, and it was reported as cystic encephalomalacia (Figure 1,2,3,4). The operation was decided due to progressive neurological sign of the right arm. During the operation, the cyst fluid was as clear as the appearance of cerebrospinal fluid, and no mural lesion was coincided with. The cyst walls were anastomosed each other in addition to taking a specimen for histopathological diagnosis. The lesion was turned out to be GBM as a result of the histopathological examination. Postoperative radiotherapy was given after definitive diagnosis.

**Figure 1****Figure 3****Figure 2****Figure 4**

*Figure 1,3. T1 axial plain magnetic resonance imaging with and without contrast enhancement show no difference.*

*Figure 2,4. Similarly to axial plain, T1 sagittal plain magnetic resonance imaging with and without contrast enhancement obviously detects no contrast enhancement, edema and shift effect those are typical findings of glioblastome appearance.*

## **DISCUSSION**

Glioblastoma is remarkable for the diversity of morphological and radiological appearances, depending on the amount of hemorrhage, necrosis or its age. Typical appearance of the GBM is an inhomogeneous mass with a hypodense center and a variable ring of enhancement surrounded by edema. Mass effect from the tumor and edema can also be seen (2). But, this is not specific, because other lesions such as abscess, metastasis, and other entities may have a similar appearance (3).

Encephalomalacia is a localized softening of the brain substance, due to hemorrhage, infarct, trauma or inflammation. Multicystic encephalomalacia refers to the formation of multiple cystic cavities of various sizes in the cerebral cortex following injury, most notably hypoxia-ischemic events. It is histopathologically characterised by destruction of brain parenchyma, presence of multiple glial septations surrounded by astrocytic proliferation. It is a permanent cavity in the brain and the size of the cavity shrinks with time, but not completely (4,5).

This case highlights unusual central nervous system (CNS) manifestations in a patient with parietal lobe glioblastoma. The presenting symptoms and brain MRI are not suggestive of GBM. However, radiological findings for encephalomalacia can lead to delays in the diagnosis of glioblastoma and treatment of patients, and thus resulting in significant cerebral morbidity and poor prognosis. For this reason, it should not be avoided from histopathological examination in suspected cases

In conclusion, glial tumors present itself in not same forms. GBM should always be considered in the differential diagnosis of intracranial space occupying lesions. Even such a lesion that resembles encephalomalacia should be kept in mind to able to be GBM, and surgery should be performed, especially in patients with progressive complaint.

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