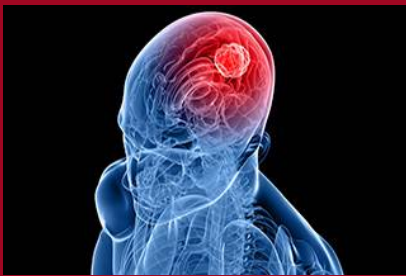


EM CASE OF THE WEEK

BROWARD HEALTH MEDICAL CENTER DEPARTMENT OF EMERGENCY MEDICINE

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As an ED physician, one must always be diligent to rule out the most dangerous diagnosis on a patient's differential. Brain masses can often present with vague symptoms, such as headaches, weakness or personality changes/depression. It is important to do a thorough work-up and not dismiss the patient's vague complaints.

EM CASE OF THE WEEK

EM Case of the Week is a weekly "pop quiz" for ED staff. The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.



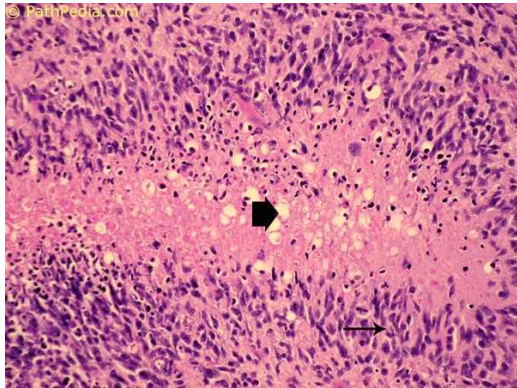
Glioblastoma Multiforme

A 50-year-old female presents to the ED status post fall complaining of mildly slurred speech and left facial droop. She also complains of right-sided headaches for the past 6 weeks. Her vital signs are T 98.2, HR 73, RR 16, BP 133/99. She is examined by the ED physician and sent for a non-contrast head CT. The head CT reveals a 7 cm heterogeneous mass in the right cerebral hemisphere. Patient was admitted and underwent a microscopic dissection two days later. She was ultimately diagnosed with a glioblastoma multiforme tumor. Which of the following statements about glioblastoma multiforme (GBM) is true?

- The prognosis for patients diagnosed with glioblastoma multiforme is fairly good, with the 5 year survival rate >50%.
- Glioblastoma multiforme is the most common primary brain tumor in adults.
- CT scans are superior to MRI scans in the characterization of brain masses.
- The initial treatment for high grade gliomas (such as GBM) is chemotherapy.
- Gliomas are classified into grades I-IV, and glioblastoma multiforme is considered Grade III.



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Glioblastoma Multiforme

The correct answer is B. Glioblastoma multiforme is the most common primary brain tumor in adults. Although the most common overall brain tumor in adults is a metastatic tumor, the most common PRIMARY tumor is GBM, followed by meningiomas and schwannomas.

Answer A: GBM is a fast growing malignancy that carries a very poor prognosis. The life expectancy at the time of diagnosis is <1 year.

Answer C: Contrast enhanced MRI scans are far superior to CT scans for the characterization of brain masses.

Answer D: The initial treatment for a high-grade glioma such as GBM is surgical resection; followed by radiation and/or chemotherapy treatments.

Answer E: Gliomas are in fact classified as grades I-IV. However, GBM is a high grade glioma, grade IV (not grade III).

Discussion:

Brain tumors may present with vague and/or common symptoms, which can often make the diagnosis difficult. Primary brain malignancies are much less common in adult patients than metastatic tumors, so they are often not thought of in younger patients who present with seemingly unrelated symptoms.

In the case of the patient discussed above, her main complaint in the ER was a fall earlier that morning after she picked up her purse at work. She was forced to come to the ED by her cousin and coworkers. The patient attributed her fall to just losing her balance.

The patient also dismissed her cousin's concerns about her speech and mild facial droop, and attributed those symptoms, as well as her headaches, to her history of clinical depression.

(cont'd. next page)

Take Home Points

- Metastatic brain tumors are far more common than primary brain tumors. Of the primary brain tumors, glioblastoma multiforme (grade IV glioma) is the most common.
- High grade gliomas can often present with a variety of symptoms such as headache, confusion, and changes in speech. The variety and vagueness of the symptoms can make it difficult to diagnose a brain mass.
- Both CT and MRI can be used to characterize brain masses, but MRI is superior.
- The treatment of GBM begins with surgical resection. Due to the high recurrence rate of these lesions, surgical resection is often followed by radiation therapy and chemotherapy.

For a list of educational lectures, grand rounds, workshops, and didactics please visit

<http://www.BrowardER.com>

and click on the "Conference" link. All are welcome to attend!

