

# The Whole Picture: Addressing the Diverse Needs of the Patient Treated for a Brain Tumor

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Mr. G is a 56-year-old man who had surgical resection of a left frontal/temporal glioblastoma followed by concurrent radiation and temozolomide, an oral alkylating agent. Seven months after surgery, he is visiting the clinic with his wife for evaluation prior to starting his fourth month of adjuvant temozolomide. The oncology nurse notes that Mr. G's medication regimen includes levetiracetam 1,000 mg twice daily for seizure prophylaxis, dexamethasone, protonix, venlafaxine XR for dysphoria, enoxapril, and a multivitamin. He also takes a daily 10 mg dose of donepezil, a centrally acting reversible acetylcholinesterase inhibitor, to improve cognitive function. He denies any seizures or headache. He notes his speech, cognitive function, and energy level are better. Although Mr. G states he is fine, his one-word responses prompt the nurse to perform an additional assessment.

## Nursing Assessment

The nurse knows that asking Mr. G questions such as "What are you doing with yourself?" will elicit a more complete response related to his symptoms and functional status than questions requiring short answers. The nurse discusses changes in physical, cognitive, and emotional function with Mr. G's wife (see Figure 1), attempting to elicit specific examples. Mrs. G notes her husband continues to tire easily but is now able to walk at least four houses down the block. At the end of concurrent radiation and chemotherapy, he was forgetful, unmotivated, and withdrawn. Now Mrs. G sees some progress but adds that her husband refused to

attend a family dinner with his children and grandchildren.

The clinic oncology nurse finds Mr. G is a bit lethargic with a flattened affect but more interactive than at his last visit four weeks ago. He follows commands slowly. His Mini Mental State Examination score is 26 out of 30 compared to 25 out of 30 at his last visit. Mr. G's speech is limited, as demonstrated by his single-word responses to questions. When the nurse asks him open-ended questions to encourage interaction, he puts together short sentences.

The nurse practitioner's physical examination of Mr. G reveals a complete visual field cut on the right, decreased grip strength on the right, bilateral quadri-

ceps weakness, and slowed gait. The area of calf swelling and tenderness from deep vein thrombosis (DVT) has resolved, and the steroid facies and swelling at his ankles are decreased from his last visit. Complete blood count is normal; metabolic profile shows electrolytes, creatinine, and liver function within normal limits; glucose is 130. Magnetic resonance imaging (MRI) of the brain shows stable disease.

## Etiology of Symptoms

Patients with brain tumors may experience a cluster of symptoms related to the tumor and treatment. Neurologic symptoms as a result of tumor location (see Figure 2) may include cranial nerve involvement, sensory or motor deficit, dyspraxia, gait disturbance, and difficulty with communication. Personality change, cognitive dysfunction, and mood disorder may be less obvious and difficult to quantify (Correa, 2006). Intracranial lesions may cause seizures or vasogenic edema. Seizures occur in 20%–45% of patients with primary brain tumors at some point in their illness. Seizures range from mild focal events, which are a nuisance, to full-blown generalized episodes with loss of consciousness. The choice of anti-epileptic drug (AED) is based on tolerability and potential for side effects or drug interactions. Levetiracetam is effective

- Activity level
- Anxiety, depression
- Fatigue
- Focal weakness
- Gait, balance
- Headache
- Interaction with others
- Memory
- Numbness, tingling in extremities
- Overall cognitive function
- Seizure
- Speech

**Figure 1. Elements of Neurologic Nursing Assessment**

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