

## Biobehavioral and Sociocultural Dimensions of Cancer-Related Fatigue

### Case Study

Mrs. L is a 40-year-old woman who was born in Korea and relocated to Los Angeles, CA, two years ago with her husband and two young children. The transition has been difficult for Mrs. L because she feels isolated from the family and friends she left behind. Despite this, she was in her usual state of good health when, while in the shower, she felt a pea-sized, firm mass on her right breast. An ultrasound revealed a 1.3 cm irregularly marginated hypervascular mass suspicious for malignancy. Biopsy confirmed a poorly differentiated infiltrating ductal carcinoma of the right breast, estrogen receptor-negative, progesterone receptor-positive, Ki-67/3% (i.e., a molecular tumor marker predictive of tumor division and a prognostic factor being evaluated in breast cancer recurrence). Further staging workup was negative for metastatic disease. Mrs. L began neoadjuvant chemotherapy with doxorubicin 50 mg/m<sup>2</sup> and docetaxel 75 mg/m<sup>2</sup> every 21 days for six cycles. On completion of the adjuvant chemotherapy, she underwent a lumpectomy of the right breast with complete axillary lymph node dissection. Pathology confirmed a poorly differentiated infiltrating ductal adenocarcinoma, 2.4 cm in greatest dimension, with 7 out of 12 positive axillary lymph nodes. Subsequently, Mrs. L was scheduled to receive radiation to the right chest wall, with a boost to the mastectomy scar and supraclavicular field. Following radiation, she will receive leuprolide 22.5 mg intramuscularly every three months.

At the time of diagnosis, the nurse taking Mrs. L's history and assessment noted a shy and anxious but sweet young woman who appeared overwhelmed with her circumstances. She spoke English and appeared to understand her treatment situation, but her husband did the majority of speaking for her. During her second cycle of chemotherapy, Mrs. L began to appear tired and anxious during her clinic visits but always denied problems or concerns. After completion of chemotherapy, Mrs. L was tearful during a follow-up clinic visit after her lumpectomy. Laboratory work demonstrated the following: hemoglobin 10.0 g/dl, hematocrit 30%, platelets 140,000 mm<sup>3</sup>, and white blood cells 3,200 mm<sup>3</sup>, with an absolute

neutrophil count of 1,500 cells/mm<sup>3</sup>. Upon questioning, Mrs. L hesitated but did admit to feeling slightly short of breath on activity and stated that she had no energy.

Mrs. L always was accompanied by her husband and two children, ages 4 and 5 years. The nurse noticed that questions directed to the patient were answered most frequently by Mr. L. Giving culturally sensitive care, the nurse included the husband in the assessment process but repeated questions directly to Mrs. L when necessary. The nurse also looked to Mrs. L to reaffirm the husband's perceptions. Using a 0 (no fatigue) to 10 (severe fatigue) scale, Mrs. L quantified her fatigue level as 7. The nurse also asked the following question to help the patient further quantify her energy level: "What is your 0–10 level on awakening in the morning, and what is it after feeding and dressing the children?" These activities exhausted her, and Mrs. L expressed shame because she believed she was not being a good wife and mother. She admitted to being tearful every day and crying when she feels anxious and tired because she cannot manage all of her household chores. After further questioning, Mrs. L stated that her job entailed managing the household and childcare duties; as a result, she did not expect help from her husband. She said, "It is my fault for getting this cancer. I probably would not have it if I had not been so stressed since we moved to the United States." Appearing anxious she asked, "How am I going to have this radiation treatment?"

Grace Cherry, RN, MSN, OCN®  
Oncology Nurse Practitioner  
University of California, Los Angeles  
Los Angeles, CA

### Clinical Problem Solving

Responding to this clinical interview by Associate Editor Nancy Jo Bush, RN, MN, MA, AOCN®, is Grace Cherry, RN, MSN, OCN®, oncology nurse practitioner at the University of California, Los Angeles.

### How is the fatigue experienced in the healthy populations differentiated from cancer-related fatigue (CRF)?

Fatigue can be categorized as physiologic, acute, or chronic (Desai, 2001; Morrison &

Keating, 2001; Rodriguez, 2000). Physiologic fatigue develops in healthy individuals when one of the following occurs: inadequate sleep, not enough rest, over activity, poor physical conditioning, stress, or a change in diet. Correction of these factors usually leads to rapid improvement. Acute fatigue is unexplained by a physiologic process, less than six months in duration, and not relieved with bed rest. Chronic fatigue is not partially or completely resolved by rest or sleep, but it is persistent and lasts for more than six months.

On the other hand, CRF has numerous definitions, including "a persistent, subjective sense of tiredness related to cancer or cancer treatment that interferes with usual functioning" (Mock et al., 2004, p. FT1). This is a distressing symptom characterized by diminished energy and impairment in concentration, memory, activities of daily living, psychological stability, and motivation (Portenoy & Itri, 1999). CRF can be acute or chronic and, unlike physiologic fatigue or fatigue experienced by healthy individuals, is more distressing, more severe, and not relieved by rest or sleep (Mock et al.; National Cancer Institute [NCI], 2004). CRF is the most common symptom in patients experiencing cancer and reportedly causes the most distress (Curt et al., 2000).

### Which etiologies should be considered when evaluating CRF and why?

CRF is a multidimensional phenomenon, but its exact mechanism is unknown (NCI, 2004). However, a neuropsychological model of the central nervous system (CNS) and peripheral nervous system (PNS) has been proposed (NCI). Impairment of the CNS and PNS may be caused by chemotherapy and biologic therapy. In addition, medications that act on the CNS may compound fatigue.

*The solutions offered to the clinical problems posed in this column are the opinions of the authors and do not represent the opinions or recommendations of the Oncology Nursing Society, the Oncology Nursing Forum, or the editorial staff.*

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