The Phenomenon of Chemo Brain

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During and following chemotherapy, some patients experience difficulties with memory, attention, and other aspects of cognitive function. This constellation of deficits commonly is referred to as chemo brain. Although the phenomenon is not understood completely, it is assuming greater significance as cancer survival improves. Return to prediagnosis levels of domestic, employment, and academic activity is expected in most survivors. Advances in basic, imaging, and clinical sciences are beginning to unravel pathophysiologic mechanisms and develop neuroprotective strategies. Pharmacologic options are borrowed from diverse diseases, including attention-deficit/hyperactivity disorder and neurodegenerative diseases. Conventional therapies soon may find new applications; for example, recent preclinical data suggest that erythropoietin may have some neuroprotective abilities, which may positively affect patients experiencing chemo brain. A collaborative model is bringing together international specialists interested in unraveling the mysteries of the phenomenon and developing management strategies to attenuate its effects. This article will review the clinical features of chemo brain as well as a working hypothesis regarding pathophysiology. The potential and emerging interventions that can be used by oncology nurses to assist patients and their families to cope with this enigmatic dysfunction will be discussed.