



Chemo-brain - A New Entity?

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My opinion

Memory and language deficits in patients receiving chemotherapy have been noted; however, the aetiology is unknown. Particularly in the treatment of breast cancer, confounding factors include hormone therapy, and stress and anxiety during treatment. There are inconsistencies among clinical researchers over the neuropsychological correlates present in cancer survivors with some reports indicating that only a minority of patients have cognitive deficits that interfere with their every day life (Shilling & Jenkins, 2007).

Evidence from MRI scans of brain damage following radiotherapy and chemotherapy has been reported (Stewart, Bielajew, Collins, Parkinson, & Tomiak, 2006). Cognitive impairment, irrespective of education, profession, mood, or clinical characteristics, was found in terms of processing speed, attention, and learning (Wefel, Lenzi, Teriault, Davis & Meyers, 2004). Despite being subtle, these cognitive deficits led to functional loss manifested in decreased ability to work which is also associated with central toxicity.

Yet others have not found any difference in cognitive performance when comparing cardiac patients with cancer survivors and matched controls (Mehlsen, Pedersen, Jensen & Zachariae, 2009). The idea that patients may be conditioned to eliciting cognitive deficits as responses has also been proposed (Bovbjerg, Redd, Maier, Holland, Lesko & Niedzwiecki, 1990).

Receiving chemotherapy may function as a conditioned response giving rise to cognitive deficits and subsequent immunosuppression. Conditioned immuno-suppression may explain some of the undesirable and distressing effects of chemotherapy such as nausea, though this line of explanation is not entirely popular in light of the known toxicity of pharmaceuticals used in treatment of cancer patients.

The authors would welcome information and data to assist with their enquiry.

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