PII-23: Stress effects on immune function of spousal caregivers

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Abstract:

Introduction: Stroke survivors are often left with physical and psychosocial disabilities that affect independence in ADLs and decision-making. Most stroke survivors return home after initial hospitalization and are assisted in the recovery process by a primary family caregiver (CG), usually the spouse. There is a growing body of literature suggesting that the caregiving stress alters immune function and places CGs at greater risk for physical health problems.

Method(s): CAReS was a 5 year randomized longitudinal study that followed stroke survivors and their spousal CGs. CAReS utilized an APN to provide education, support, skill training, counseling, and social and community linkages for stroke survivors and their spouses post-hospital discharge. 159 participants were recruited between November 2001 and December 2005 from 5 hospitals and rehabilitation centers Texas. Hypothesis: Spousal CGs of stroke survivors in the intervention group will have less adverse alterations in cytokine balance at 12 weeks post discharge. Venous blood for CG cytokine analysis was drawn. To determine intervention effect on cytokine imbalance, we generate cytokines from cell cultures and analyze culture supernatants and plasma samples for their immunoregulatory cytokine content. Cytokines studied were gamma interferon, interleukin 4 (IL-4), IL-10 and IL-12.

Results: Comparison of changes in CG cytokine levels were conducted using intention to treat analysis for comparing the 2 CG groups. Spousal CG in the intervention group had a higher baseline IFN/IL 12 (Th1) ratio (p=.0444) cytokine balance at 12 weeks post discharge than the usual group.

Discussion & Conclusions: Stress alters homeostasis through a complex neuroendocrine and immune response. Marshall(2004) noted that catecholamines and glucocorticoids can induce a shift in cytokine balance during stress response. The shift represents a change between humoral and cell mediated response. Our study demonstrated that spousal CG of stroke survivors experience this imbalance and our intervention was effective at 12 weeks. Recommend exploring newer stress markers for future research Conclusion: Spousal CGs receiving education, counseling, and social linkages had a shift from Th2 back to Th1.
Abstract History:
This abstract has not been presented or accepted for presentation in whole or in part at the SNRS or other scientific meeting.

Financial Disclosure:
No, I (or a member of my immediate family) have not received something of value* from or own stock (or stock options) in a commercial company or institution related directly or indirectly to the subject of my presentation.

FDA Disclosure:
I will not be describing any pharmaceutical and/or medical device.

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