1989-10-22

University Hospital News: October 22, 1989

University Hospital, Office of Media Relations

http://hdl.handle.net/2144/20290

Boston University
PSYCHOLOGICAL FACTORS MAY IMPROVE IMMUNE FUNCTION IN AIDS PATIENTS

Boston, Mass.—Psychological factors--such as depression, anger, curiosity or commitment--appear to have either a positive or negative effect on immune function in AIDS patients and may be important cofactors that influence the progression of the disease. In the current issue of Brain, Behavior and Immunity, researchers at Boston University School of Medicine (BUSM) report the results of a pilot study to determine to what extent mental attitude was helping a group of AIDS patients who were doing well. These patients had chosen a macrobiotic approach to healing, combining a vegetarian diet with a healthy lifestyle that included little alcohol, no drugs and regular exercise.

BUSM researchers followed the progress of 19 AIDS patients who were following a macrobiotic regimen and who unexpectedly showed an increase in lymphocyte counts--including CD4 immune cells--in the first two years after diagnosis of Kaposi's sarcoma. The number of lymphocytes usually decreases following HIV infection and the loss of these cells, particularly CD4 cells, strongly predicts the progression of the disease.

Although many components of the macrobiotic lifestyle could affect the immune system, the researchers investigated the influence of mood and personality factors. They suspected that those who could avoid the hopelessness associated with AIDS would have better immune status, and that AIDS patients following a macrobiotic regimen--which requires a great deal of discipline and commitment--may express unique psychological characteristics.

Nine of the 19 AIDS patients participated in this pilot study by answering a battery of psychological questionnaires that measured depression, anger, anger expression, anxiety, curiosity, mood and hardiness--or sense of control,
commitment and acceptance of change (challenge). They also had their blood
drawn at periodic intervals. Six healthy male volunteers also following a
macrobiotic lifestyle answered the questionnaires as a comparison group.

AIDS patients and the macrobiotic controls had similar scores measuring
depressive symptoms. Scores for five other mood disturbances were similar,
although AIDS patients had somewhat lower scores. Men with AIDS had scores
indicating greater vigor and lower tendencies to anxiety. The controls had
low scores for the expression of anger, while AIDS subjects did not.

Evaluating the correlation between immune function in AIDS patients and
psychological factors, the researchers found that AIDS patients who measured
high in curiosity had higher CD4 numbers and mitogen responsiveness, which
measures lymphocyte function. Vigor was positively associated with higher CD4
numbers, while hardiness correlated with mitogen responsiveness. In contrast,
there was an association of depression and anxiety with low CD4 numbers.

The AIDS patients studied had improved immune measures, decreased mood
disturbances and increased vigor, leading researchers to conclude that
emotional-state and personality-trait measures had strong associations with
immune measures that are important predictors of how AIDS is progressing.
However, the researchers added that the study was too small to draw firm
conclusions.

"This pilot study suggests that we need to look further into the role of
the psyche in AIDS," says Elinor Levy, Ph.D., the principal investigator of
the study and an associate professor of microbiology at BUSM. "Mood and
personality traits may be important cofactors that determine when someone who
is infected with the virus progresses to AIDS."

Levy says, although preliminary, this study would support the concept that
one's mind can influence one's health, and that research is needed to design
psychological and behavioral interventions aimed at improving the health of
HIV-infected people.

The results of this study are discussed in the new book, The Way of Hope,
written by Tom Monte and published by Warner Books.

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