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Oral presentation

Parallel dysregulation across psychoimmunological and cardiovascular response systems in HIV+ outpatients

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Background

Higher Type C coping (under-recognition and under-expression of stress/needs/emotion, and psychological/psychophysiological dyssynchrony) is associated with faster HIV progression. In a pilot study, we found that higher Type C coping was significantly associated with lower HIV-specific antigen-stimulated production of HIV CCR5 co-receptor ligands (beta-chemokines MIP-1α/β), which are potent HIV inhibitors. This study replicates and extends these findings.

Methods

Type C coping was assessed using the validated Vignette Similarity Coping Method. In-vitro production of MIP-1α/β in response to the HIV-specific p24 antigen was measured by ELISA from supernatants collected on days 3 and 6. Heart rate and systolic/diastolic blood pressure were recorded every 90 seconds during two emotion-induction tasks, each preceded by a baseline resting period and followed by a recovery period.

Results

Results from the first 100 participants (90% African-American, 55% female) suggest a replication of our previous finding: strong Type C coping is associated with significantly decreased MIP-1α production ($r = -1.81$, $p = .04$). In multiple regression analyses adjusted for age and medication use, greater HR reactivity/poorer HR recovery to baseline are significantly associated with decreased MIP-1α/β response to the p24 antigen.

Conclusion

These findings support our central hypothesis that dysregulated coping and physiological patterns are associated with HIV immune responses that contribute to HIV progression.