

Poster presentation

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Psychoimmunological facets of psychosomatic diseases: bronchial asthma vs. rheumatoid arthritis

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Background

In view of concept of bidirectional communication between the immune system and the central nervous system psychological modulation of immune function is now well-established phenomenon. The body of knowledge generated by earlier work has clearly informed the development of the psychoneuroimmunology (PNI) field. Indeed, PNI studies, in which a specific immune variable is examined in the context of psychological processes and health outcomes, are extensions of early psychosomatic studies. Modern PNI emerged within the context of broader psychosomatic investigations. These studies, on the one hand, related psychological characteristics, behaviors, and emotions with disease onset and progression, including allergy, asthma, peptic ulcer, cancer, autoimmune diseases, and infectious diseases. On the other, it was specially emphasized that personality characteristics and coping styles, reflecting individual differences in appraisal and response to stressors, differentially influence immune function. The main objective of this study was to investigate personality characteristics and coping styles in patients with two psychosomatic diseases, i.e., bronchial asthma (BA) and rheumatoid arthritis (RA), manifesting different mechanisms of altered immune function. Another objective was to investigate associations of these psychological variables with immune indices. Finally, the third goal was to compare PNI patterns of these two diseases.

Materials and methods

Inpatients with BA (n = 48), RA (n = 42), and healthy control (n = 30) individuals were investigated (the age range in the study was 25-55 years). The following psychometrical variables were assessed: Anxiety State and Trait — STAI, Depression — BDI, Alexithymia — TAS-20, Types of Aggression and Hostility — Buss-Durkee Aggressiveness

Inventory, Psychological Defense Patterns — Life Style Index of Plutchik-Kellerman-Konte). The immune parameters were investigated using flow cytometry methods.

Results

In general when compared to the control individuals patients from both clinical groups manifested enhanced scores of anxiety, depression, alexythymia and hostility. Distinctive peculiarities of patients with BA consisted in significantly higher levels of anxiety and neuroticism whereas patients with RA manifested decreased scores of physical aggression and aggressiveness indices along with enhanced scores of offence and auto-aggression. The strength and salience of psychological defense distinguished the controls from the patients in the two groups. Furthermore, the two clinical groups differed in such a manner that the patients with BA manifested prevailing symptoms from "regressive triad" whereas the patients with RA exhibited dominating symptoms from "depressive triad". The rank-correlation analyses among psychometrical and immune variables revealed different patterns of psychoimmune relationships in the studied groups.

Discussion

The findings evidence that BA and RA are accounted by altered PNI interplay patterns, involving personality characteristics, coping styles and immune indices.

References

1. Kiecolt-Glaser OK, McGuire L, Robles TF, Glaser R: **Emotions, morbidity and mortality: New Perspectives from Psychoneuroimmunology.** *Annu Rev Psychol* 2002, **53**:83-107.
2. Dekkers JC, Geenen R, Evers AVW, Kraaijmaat FW, Bijlsma JW, Godaert GL: **Biopsychosocial mediators and moderators of stress-health relationships in patients with recently diagnosed rheumatoid arthritis.** *Arthritis Rheum* 2001, **45**:307-316.

3. Marshall GD Jr, Agarwal SK: **Stress, immune regulation, and immunity: applications for asthma.** *Allergy Asthma Proc* 2000, **21**:241-246.

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