

Letter to the editor

Neural-immune-effector trophobiology: possible psychologic implications in the allergic patient

Two recent papers evaluate psychologic symptoms in allergic patients with asthma, rhinitis, urticaria, and eczema (3, 8). Michel (8) relates the affective hypersensitivities of these patients to nerve-mast-cell bidirectional links (see his Figs. 2 and 3, and his Reference 3). Badoux & Levy (3) found that emotional disorders are more frequent in allergic women than allergic men.

Here we briefly discuss the following two topics of these papers.

Michel's nerve-mast-cell bidirectional links and psychologic symptoms in the allergic patient (8)

We further suggest that the neural-immune-effector (NIE) trophic interactions (trophobiology, trophobiologic cross-talk) (Reference 6 and research cited therein) might be, at least in part, helpful in evaluating biologic and affective hypersensitivities of the allergic patient. Recently, Aloe et al. (1) provided exciting evidence of a correlation among aggressive behavior, nerve growth factor (NGF) release, and mast-cell degranulation, showing that mast cells synthesize, store, and release biologically active NGF (7), as well as respond with proliferation to NGF treatment (1, 7). In view of the well-known role of mast cells in lung (5) and skin (9) allergy, we wonder what is the plasma and tissue level of NGF in the allergic diseases herein discussed. It has already been shown that both NGF level and mast-cell numbers are increased in systemic sclerosis (10), parasitic infections (2), and other diseases (7). The recently introduced cutaneous microdialysis (9) may also be used to measure NGF and other cytokines, e.g., tumor necrosis factor- α , in the skin of patients with urticaria and other allergic skin diseases.

Badoux & Levy's finding that emotional disorders are more common in allergic women than allergic men (3)

In an ongoing study, we found that estradiol has an immunotrophic action, thus inducing mast-cell proliferation in various organs (unpublished data). Could this be related to the more frequent appearance of psychologic disorders in allergic women?

In conclusion, we suggest that further studies on NIE trophobiology may open new approaches to understanding the pathogenesis and improving the therapy of allergic diseases; in particular, the related psychologic disorders.

We are now learning exciting lessons from the concept of neuroendocrine-immune communication (8). This may also be the case with NIE trophobiology (5, 6, 11).

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Letter to the editor

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