Airway hyperresponsiveness, elevation of serum-specific IgE and activation of T cells following allergen exposure in sensitized Brown-Norway rats.

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Abstract: T lymphocytes may play a regulatory role in the development of allergic airway hyperresponsiveness (AHR). We have studied the relationship between airway responsiveness and a number of immunological changes in Brown-Norway rats sensitized intraperitoneally and repeatedly exposed to ovalbumin (OVA) aerosol. Acetylcholine provocation concentration (PC)150 (the concentration of acetylcholine causing a 150% increase of base-line lung resistance) was measured and peripheral blood and bronchoalveolar lavage (BAL) cells were collected 18-24hr after the final exposure. Total and OVA-specific IgE in serum was measured by enzyme-linked immunosorbent assay (ELISA). Mononuclear cells were analysed by flow cytometry after labelling with monoclonal antibodies against CD2 (pan T-cell marker), CD4, CD8 (T-cell subsets) or CD25 (interleukin-2 receptor). There were significant differences in PC150 (P

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