Immunologicalaspect of atrophic rhinitis

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- 81 -SUMMARY and CONCLUSIONThis study included 20 patients with atrophic rhinitisand 10 normal adults as a control group.Besides the ordinary routine laboratory tests, both thepathologic and control groups were subjected to the followingimmunologic tests :1. In vitro leucocyte migration test: A crude extract ofhealthy adult nasal mucosa was used against the patient’slymphocytes in a concentration of 200 ug/ml.2. The spontaneous rosette test: to determine the absolutenumber of peripheral blood T-lymphocytes.In the first test, eighteen out of the 20 patients (90%)showed inhibition of leucocyte migration. One case showedstimulation of migration and one case showed normal migration.None of the controls showed evidence of inhibition of leucocytesmigration.Our findings in rosette test showed a significant decreasein the relative proportion of T-cells -(percentage ofrosette forming cells) as well as in the absolute numberof T lymphocytes in patients with atrophic rhinitis ascompared to normal control.The absolute number of lymphocytes bears no relationto the expression of leucocyte migration test. The testdepends on presence of functioning sensitized lymphocytesirrespective of the total number.- 82 -The results suggests the presence of an auto-immune mechanisminvolved in the pathogenesis of atrophic rhinitis. Thisaltered cellular reactiVity or loss of tolerance to nasaltissues and cells may be precipitated primarily by virusinfection, malnutrition and iron deficiency,which triggersoff a destructive auto-immune process, with the release ofantigen of nasal mucosa in the circulation. The lymphocytesfail to recognize the liberated antigen as being self andmount a destructive attack against them.It has been suggested that incorporation of host antigensinto the outer coat of the viral particle may pl~ a part inprovking auto-antibodies to the altered antigens (Kleim, 1967and Mellors et al., 1969).Further study is needed to recognise which component ofthe nasal mucosa acts as antigen towards the lymphocyte populationin patients with atrophic rhinitis as well as thetype of immunodeficiency underlying this disease. This mayserve for a better understanding of the pathogenesis of thedisease, hoping for early recognition, more effective linesof management as well as the promise of possible prevention.~----~--- ~-~~-