SUMMARY AND CONCLUSION

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This study included 20 patients with atrophic rhinitis and 10 normal adults as a control group.

Besides the ordinary routine laboratory tests, both the pathologic and control groups were subjected to the following immunologic tests :

1. In vitro leucocyte migration test : A crude extract of healthy adult nasal mucosa was used against the patient's lymphocytes in a concentration of 200 ug/ml.
2. The spontaneous rosette test : to determine the absolute number of peripheral blood T-lymphocytes.

In the first test, eighteen out of the 20 patients (90%) showed inhibition of leucocyte migration. One case showed stimulation of migration and one case showed normal migration. None of the controls showed evidence of inhibition of leucocytes migration.

Our findings in rosette test showed a significant decrease in the relative proportion of T-cells (percentage of rosette forming cells) as well as in the absolute number of T-lymphocytes in patients with atrophic rhinitis as compared to normal control.

The absolute number of lymphocytes bears no relation to the expression of leucocyte migration test. The test depends on presence of functioning sensitized lymphocytes irrespective of the total number.

The results suggests the presence of an auto-immune mechanism involved in the pathogenesis of atrophic rhinitis. This altered cellular reactivity or loss of tolerance to nasal tissues and cells may be precipitated primarily by virus infection, malnutrition and iron deficiency,which triggers off a destructive auto-immune process, with the release of antigen of nasal mucosa in the circulation. The lymphocytes fail to recognize the liberated antigen as being self and mount a destructive attack against them.

It has been suggested that incorporation of host antigens into the outer coat of the viral particle may play a part in provking auto-antibodies to the altered antigens (Kleim, 1967 and Mellors et al., 1969).

Further study is needed to recognise which component of the nasal mucosa acts as antigen towards the lymphocyte population in patients with atrophic rhinitis as well as the type of immunodeficiency underlying this disease. This may serve for a better understanding of the pathogenesis of the disease, hoping for early recognition, more effective lines of management as well as the promise of possible prevention.