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Desquamation and Squamotransformation of Rhinomucosa as a Prodromal Sign of Atrophic Rhinitis

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Key Words

Atrophic rhinitis

Cytological diagnosis

Abstract

The desquamation and squamotransformation of rhinomucosa is described in 10 patients who developed typical atrophic rhinitis later. It may be considered a prodromal sign of atrophic rhinitis, and may be helpful in early diagnosis.

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Materials and Method

139 cases were studied in this series, divided into four groups: group 1: 57 normal subjects (control group, male: 33, female: 24); group 2: 27 cases of acute and chronic catarrhal rhinitis (coryza), hyperplastic rhinitis, and periodic (allergic) rhinitis (male: 10, female: 17); group 3: 45 cases of atrophic rhinitis (male: 27, female: 28), and group 4: 10 cases of early atrophic rhinitis (male: 5, female: 5).

Simple nasal swabs, taken by rubbing the suspected conchae without touching the mucosa of the anterior nasal vestibulum, were spread and smears were prepared carefully in one direction (avoiding to and fro smearing). Smears were fixed in a solution composed of equal parts of ether and 95 % alcohol for 30 min and then stained with haematoxylin and eosin or Papanicolaou's stain.

Results

All smears were studied under the microscope with high power. The results were as follows:

Group 1: All smears revealed columnar epithelial cells. A few cases contained polymorphonuclear leucocytes.

Group 2: The majority of cases revealed cylindrical epithelial cells with occasional polymorphonuclear leucocytes. Only 1 case of allergic rhinitis showed keratinized squamous cells.

Group 3: All cases revealed keratinized squamous cells with occasional columnar

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Discussion and Conclusion

The desquamated nasal epithelial cells of normal subjects and patients not suffering from atrophic rhinitis were columnar cells while in atrophic rhinitis keratinized cells were found. That accords with the progressive atrophic pathological character to the nasal mucosa and concha in atrophic rhinitis including the thinning of the mucosa, sloughing of the epithelial cilia and

squamous transformation of the columnar cells. Hence it may be concluded that the desquamation and squamous transformation of rhinomucosa may be prodromal signs of atrophic rhinitis, and that the early diagnosis of this disorder may be assisted by the cytological study of nasal mucous.

cells and polymorphonuclear leucocytes. The number of keratinized cells was proportional to the intensity of the conchal atrophy.

Group 4: All cases revealed keratinized squamous epithelial cells with occasional columnar cells.