Abstract

Background: Sparse data are available in literature about pattern of nasal affection in Sjogren syndrome (SS).

Objective: To study the ultrastructural changes in the nasal mucosa in SS patients with nasal dryness.

Methods: Light microscopy and transmission electron microscopy (TEM) of anterior end of inferior turbinate in 14 patients with SS experiencing nasal dryness and five healthy controls who underwent turbinate reduction surgery were included in this study. Nasal symptoms were assessed according to visual analogue score. Patients were subjected to nasal endoscopy and computerized tomography of paranasal sinuses when indicated.

Results: Light microscopy showed mild to severe lym-phocytic infiltration of nasal submucosa with dilated ducts, sparse seromucinous acini and mild fibrosis. The overlying epithelium showed variable squamocolumnar hyperplasia or atrophy with prominent goblet cell depletion. The basal lamina zone appeared apparently thickened and irregular with hyali-nosis. TEM revealed disorganized surface epithelium. The basal lamina was frequently very thin atrophic and breached. Dense collagen bundles occupied the submucoa. Collagen bundles frequently extended through breached basal lamina (BM) to the surface epithelium in a process resembling cirrhosis. Blood vessels showed vasculitis. Sparse seromuci-nous glands showed minimal mucin and apoptotic myoepithe-lial and glandular cells.

Conclusion: This study is the first to describe ultra struc-tural changes of nasal mucosa in SS, especially nasal cirrhosis. Utrastructural changes were generally indicative of an under-lying autoimmune process and may add to better understanding of path physiology of SS. Lastly nasal affection in Sjogren syndrome is underestimated.