

## Image of the Month

# Unusual Non-Neoplastic Balloon Lesion of the Nasopharynx Epithelium

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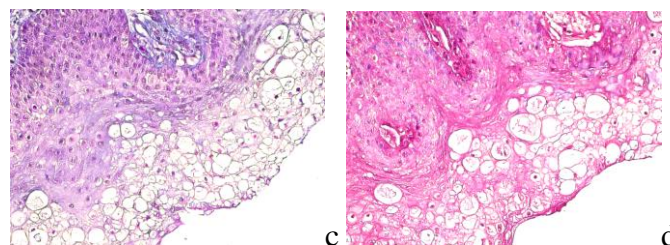
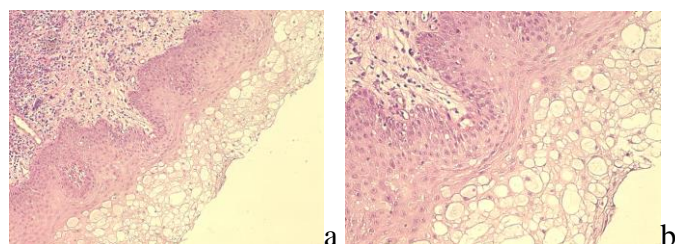
### CASE REPORT

#### INTRODUCTION

We show in this report an unusual lesion of the epithelium of the nasopharynx in a patient admitted with suspicion of a malignant tumor in the area of the head and neck. Biopsies have been taken under endoscopic visual control from the possible tumor lesions and from the surrounding apparently normal tissue. The pathological report has shown a squamous cell carcinoma associated with squamous metaplasia in the macroscopically detected lesion.

#### AN UNUSUAL LESION

The unusual aspect has been found at distance from the tumour and consists in a balloon degeneration of the upper half of the stratified squamous epithelium (fig.1a). this change was extensive and large vacuoles were noticed in the majority of superficial epithelial cells, particularly belonging to the squamous layer (fig.1b). Vacuoles were large, not stained with conventional methods, and pushed the nucleus in the periphery (fig.1c). with high power magnification, some of these cells look like white adipose cells.



**Fig.1.** Uniform vacuolar degeneration of the upper half of the epithelium (a, haematoxylin-eosin, x100). Detail of the balloon cells (b, haematoxylin-eosin, x200). No additional information with Masson trichrome staining method (c, x200). PAS negative reaction in vacuoles of almost all degenerated epithelial cells (d, x200).

The balloon cells were largely PAS and alcian blue negative, and it seems that no other substances were stored in the vacuoles. In the literature there are mentioned accumulation of substances, particularly glycogen specially in the epithelium of the esophagus, related to some viral infections [1, 2]. Based on these data, we suppose that the balloon change of the nasopharyngeal epithelium is an unusual type of metaplasia, with unknown significance.

#### REFERENCES

- [1] Chokhavatia S, Alli-Akintade L, Harpaz N, Stern R. Esophageal pathology: a brief guide and atlas. *Otolaryngol Clin North Am.* 2013;46(6):1043-1057.
- [2] Zhang X, Patil D, Odze RD, Zhao L, Lisovsky M, Guindi M, Riddell R, Bellizzi A, Yantiss RK, Nalbantoglu I, Appelman HD. The microscopic anatomy of the esophagus including the individual layers, specialized tissues, and unique components and their responses to injury. *Ann N Y Acad Sci.* 2018;1434(1):304-318.