

Morphological Study of the Nasal Conchae of the Guinea Pig

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Abstract. The histology of the conchae of the nasal cavity in the guinea pig was investigated by means of conventional light and transmission electron microscopy. The results showed a clear structural difference between the anterior and the posterior portion of the conchae, being in the first zone where the vasculature was more numerous. The arterioles and the venules were richly innervated, abounding in cholinergic nerve endings with vesicles of probably peptidergic character. The glands were located in the posterior portion and were constituted by acini, an intercalated and a striated duct. Acini as well as the intercalated duct showed cholinergic nerve endings and vesicles with also a probably peptidergic character. In conclusion, the conchae of the nasal cavity of the guinea pig showed marked morphological differences in comparison with those of humans.

Introduction

The functions carried out in the respiratory portion of the nasal cavities are several, principally related with the blood flow through the blood vessels and, besides, with the secretory products of submucosal glands [1, 2].

From an anatomic point of view, the nasal conchae are the most vascularized portions of the nasal cavity in humans [3]. It is mainly in this zone, where the blood vessels, thanks to a rich nerve supply, turn to be a cavernous tissue, responsible for the moistening and the thermic

and nerve supply of the cavernous vessels in humans exists [4, 9].

In the present work the conchae of the guinea pig are studied from an optical and ultrastructural point of view, calling special attention to the structure and nerve supply of blood vessels. At the same time a morphological description of the submucosal glands not studied to date is accomplished.

Material and Methods