

EXPRESSION OF CD68 ANTIGEN IN CHRONICALLY DISEASED HUMAN PALATINE TONSIL

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Based on the pathohistological examination of tonsillar tissue, chronic tonsillitis can be classified as chronic hypertrophic tonsillitis (CHT) and recurrent tonsillitis (RT). CD68 is a glycoprotein ubiquitously expressed on the cells of the monocyte-macrophage lineage, as well as on the dendritic cells. Macrophages and dendritic cells are major initiators, effectors, and regulators of immune response in the palatine tonsil. The aim of this paper was to examine microanatomical distribution of CD68-immunopositive cells and to determine their numerical areal density in morphological compartments of palatine tonsils with CHT and RT, in order to show the possible differences in antigen-presentation potential between these two pathological conditions. As a material we used tonsils taken after tonsillectomy, from patients of both sexes, aged 10-29 years: six tonsils with RT and nine tonsils with CHT. The quantification of CD68-immunopositive cells by "ImageJ" software was performed on 5 µm thick serial paraffin tissue slices, which were stained immunohistochemically, by using monoclonal anti-CD68 antibody. The results of morphometrical analysis showed presence of CD68-immunopositive cells in all morphological compartments of tonsils with RT and CHT, being higher in number in RT compared with CHT. Statistically significant difference in numerical areal density of the CD68-immunopositive cells was found in the germinal centers of lymphoid follicles (RT > CHT), and interfollicular lymphoid tissue (CHT > RT). The difference in the number of CD68-immunopositive cells might imply the different mechanisms involved in the infiltration of tonsillar tissue with CD68-immunopositive cells, as well as the different antigen-presenting potential in these two conditions.

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