

Abstract

Tonsils contain four specialized lymphoid compartments participating in the immune functions through their reticular crypt epithelial cells, the extrafollicular cells, the cells of the mantle zones of their lymphoid follicles and their cells in the follicular germinal centers. The capacity of tonsillar lymphocytes to counter infections may be altered during the whole period of life. The classification of lymphocytes by CD antigen expression is now widely used in clinical medicine and experimental immunology. Most helper T lymphocytes are $CD3^+CD4^+CD8^-$, and most cytotoxic T lymphocytes are $CD3^+CD4^-CD8^+$. **Objective:** The present work was designed to study the distribution of CD4 and CD8 cells as subsets of tonsillar T lymphocytes at different periods of age in human. **Material and methods:** 62 tonsillar specimens were obtained from still births and from children aged from 1-9 years. Specimens were processed for paraffin sections, and stained with Hematoxylin and Eosin and immunohistochemical stains to demonstrate CD4 and CD8 cells. The distribution of cells in the mantle zones, germinal centers and interfollicular areas of the tonsil was evaluated through the use of image analysis and statistical analysis of data through the use of SPSS system.

Results: There was a significant increase in the distribution of the stained CD4 and CD8 T lymphocytes in the interfollicular areas, mantle zones of lymphoid follicles and partially in the germinal centers of the examined tonsils with the advancement of age.

Conclusion: The results were discussed from the fact that the activated T-lymphocytes differentiate into several subtypes among which are CD4 and CD8 cells. These T-lymphocytes express surface proteins that interact with the foreign pathogens.

Keywords: CD4 and CD8 T- lymphocytes in human palatine tonsils.