

Publication

B-1a cells and plasma cells in periodontitis lesions

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BACKGROUND AND OBJECTIVE: Host response mechanisms in periodontal tissues are complex and involve numerous systems of interactions between cells. The B-cell lineage seems to predominate in chronic periodontitis lesions. The aim of the present investigation was to study the correlation between inflammatory cells and some functional markers in gingival lesions obtained from subjects with severe chronic periodontitis. MATERIAL AND METHODS: Thirty-eight Caucasian subjects volunteered to take part in the study. A gingival biopsy from one randomly selected diseased proximal site (probing pocket depth >6 mm and bleeding on probing positive) was obtained from each patient. Immunohistochemical preparation was used to identify inflammatory cells and functional markers. Correlations between the different percentages of cell markers were analyzed by pairwise correlation. RESULTS: B cells (B-1a and B-2 cells) occurred in larger proportions than T cells and plasma cells. A statistically significant correlation was found between the percentage of B-1a cells and plasma cells and between all B lymphocytes and plasma cells. About 60% of B lymphocytes exhibited autoreactive features. CONCLUSION: It is suggested that B-1a cells constitute a significant part of the host response in periodontitis lesions and that plasma cells may develop from both B-2 and B-1a cells.

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