R-25. Establishment of Porphyromonas gingivalis heat shock protein-specific T cell lines from atherosclerosis patients

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The discovery that human atherosclerotic plaque contains heat shock protein and that bacterial heat shock protein could induce atherosclerosis with a normocholesterol diet has shed light on heat shock protein as potential target of the immune response in atherosclerosis. Evidences have also been accumulating to suggest that periodontal infection may be one of the risk factors for the development of cardiovascular diseases. The present study has been performed to evaluate the T cell immune responses specific to Porphyromonas gingivalis (P. gingivals) heat shock protein (hsp) 60 in six patients suffering from atherosclerosis. Anti-P.gingivalis hsp60 IgG antibody titers were elevated in all patients when compared with the control group. We could successfully establish P. gingivalis hsp-specific T cell lines from mononuclear cell isolated from the atheroma lesions and the peripheral blood from the patients. The T cell lines were mixture of CD4+ and CD8+ cells producing the cytokines characteristic of both Th1 and Th2 subsets. The present findings strongly suggest that T cell immune response specific to P. gingivalis hsp60 may actively participate in the immunopathologic process of the atherosclerotic diseases.